

Army Lodging Wellness Recommendation



Fort Belvoir - Final Submittal

August 13, 2003

3D/I

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Section 1 Wellness Recommendation

The Army Lodging Wellness Program is conducted under the direction and guidance of Headquarters Army, Lodging Division (CFSC). The goal of the Fort Belvoir Lodging Wellness Plan is to provide a comprehensive assessment and planning tool to support long term capitalization of Army Lodging facilities. The Demand Analysis determines installation Lodging requirements, and reviews off-post Lodging availability and cost, arriving at the most economical solution for meeting total transient requirements and providing a final determination of the appropriate number and configuration of on-post Lodging rooms. Individual Lodging facility condition (building and building systems) and functional assessments are included with both recommendations and costs. Facility improvement and renovation versus replacement/new construction recommendations are developed based on the individual facility assessments and cost. A Lodging Master Plan for the installation is developed including renovation, replacement/new construction, and proposed new facility siting. A final recommendation defines the method for achieving the final wellness solution for the installation and will assist with project planning.

Methodology

Demand

- Demand for Lodging facilities is analyzed and adjusted for atypical past occurrences and for expected changes in the installation's population, housing, or mission. Two primary methods are used to calculate the optimum number of rooms: the number necessary to meet 80% of official demand and the number projected to be the most efficient from an operating cost perspective.
- The off-post private market is assessed for capacity and representative rates. A determination is made if the private market has the capability to handle overflow requirements of official demand.
- Room mix recommendation is based on the segmentation of the Permanent Change of Station (PCS)/Temporary Duty (TDY) mix and the expected lengths of stay. This produces the final determination of the appropriate number and configuration of rooms for the installation.

Assessment

- Existing Lodging facilities are assessed based on building and building system conditions followed by an assessment for conformance to the Army Lodging functional standards. Facilities assessed to be in fair to good condition, and meeting the majority of functional requirements, are considered for renovation. Renovation of Lodging facilities found in poor condition and configured significantly different than current standards will typically exceed 50% of the replacement costs and are recommended for replacement/new construction. This decision is supported by renovation cost comparisons as well as the assessment documentation.
- The age, condition, and existing configuration of several of the existing Lodging buildings support a finding of replacement through new construction in lieu of renovation.
- Force protection construction criteria has a significant impact on new construction. This Wellness recommendation, including building assessment, site analysis, and proposed Lodging construction, incorporates these requirements from the UFC 4-010-01, in our analysis and recommendations. Consistent with this guidance, force protection mitigation is not considered in renovation unless the renovation cost exceeds 50% of the replacement cost for a facility.

Demand Summary

Based on the historic and expected demand pattern at this facility, it is our recommendation that the number of rooms be sized using the “80% of Official Demand” criterion. Using this criterion, we expect an occupancy rate of 83% which meets 80% of the projected official demand.

Room Count and Mix Recommendation

- 559 rooms
- Proposed room mix:
 - 73 standard guest rooms
 - 444 extended-stay guest rooms offering a kitchenette
 - 42 extended-stay family suites offering a separate bedroom, sitting/living area, and kitchenette

The demand analysis has determined a need of 559 rooms; however, based on existing and proposed building configurations, the actual number recommended for the Fort Belvoir Wellness Plan will be 565 rooms.

Lodging Summary

The following Lodging for Fort Belvoir is summarized by building, including number of existing rooms and number of proposed rooms determined as part of the installation Wellness recommendation. The table also indicates the number of rooms required for a new Lodging facility based on buildings not proposed for re-use due to poor existing conditions and high renovation costs. The number of rooms for the New Proposed Lodging Facility reflects the proposed layout and does not match the exact Demand numbers because of building configuration. Proposed additional long term changes during a future phase of the Wellness Plan are also indicated.

Building Number	Existing Rooms					Wellness Recommendation (FY 08)				Wellness Recommendation (FY 18)			
	Total Rooms	Std Rms 300 sf	Extend. Stay Rms 300 sf	Family Suites 450 sf	Other Rooms	Total Rooms	Std Rms 300 sf	Extend. Stay Rms 300 sf	Family Suites 450 sf	Total Rooms	Std Rms 300 sf	Extend. Stay Rms 300 sf	Family Suites 450 sf
Wellness Recommendation based on Demand Analysis													
						559	73	444	42	559	73	444	42
Existing Lodging Facilities													
20B	12			12		12			12	12			12
80	47	44			3	0				0			
81	47	45			2	0				0			
172	1				1	0				0			
470	219		213		6	222		222		0			
505	45	32			13	0				0			
506	60			29	31	0				0			
507	42		38	4		41		37	4	0			
508	42		38	4		41		37	4	0			
509	35		32	3		33		31	2	0			
806	9			9		0				0			
807	16	4		12		0				0			
Totals	575	125	321	73	56	349	0	327	22	228	72	120	36
New Proposed Lodging Facility													
						216	72	120	24	330	0	324	6
Total Lodging Rooms													
						565	72	447	46	558	72	444	42

Summary of Room Count and Mix based on Configuration

- 565 rooms in FY 08.
 - 72 standard guest rooms;
 - 447 extended-stay guest rooms offering a kitchenette;
 - 46 extended-stay family suites offering a separate bedroom, sitting/living area, and kitchenette.

Cost Summary

Project Cost

The following table summarizes the Condition Analysis, Renovation, and Replacement Cost by individual Lodging facilities. The Wellness Recommendation indicates cost by building based on recommendation, including the proposed facility cost.

Building Number	Existing Units					Wellness Recommendation (FY 08)			
	Total Rooms	Condition Analysis Cost*	Renovation Cost**	Replacement Cost	% Condition Analysis or Renovation Cost Ratio	Total Rooms	Total Cost	Renovation Cost	New Construction Cost
Existing Lodging Facilities									
20B	12	\$ 206,310		\$ 1,405,330	14.68%	12		\$ 206,310	
80	47	\$ 1,930,105	****	\$ 2,743,575	70.35%	0			
81	47	\$ 1,838,445	****	\$ 2,743,575	67.01%	0			
172	1	***	\$ 316,655	\$ 515,155	61.47%	0			
470	219	*****	\$ 8,006,645	\$ 22,171,705	36.11%	222		\$ 8,006,645	
505	45	***	\$ 2,895,065	\$ 3,807,190	76.04%	0			
506	60	***	\$ 2,895,065	\$ 3,807,190	76.04%	0			
507	42	*****	\$ 776,725	\$ 3,291,445	23.60%	41		\$ 776,725	
508	42	*****	\$ 774,620	\$ 3,291,445	23.53%	41		\$ 774,620	
509	35	*****	\$ 697,515	\$ 2,634,450	26.48%	33		\$ 697,515	
806	9	***	\$ 938,070	\$ 1,405,330	66.75%	0			
807	16	***	\$ 1,401,770	\$ 2,345,730	59.76%	0			
Totals	575					349	\$ 10,461,815	\$ 10,461,815	\$ -
New Proposed Lodging Facility									
						216	\$ 24,228,280		\$ 24,228,280
Total									
						565	\$ 34,690,095	\$ 10,461,815	\$ 24,228,280

- * The Condition Analysis Cost is for making the building well based on Army Lodging Standards without changing how the building functions.
- ** The Renovation Cost is for making the building well based on Army Lodging Standards including making functional changes.
- *** If the Condition Analysis Cost is under 50% of the Replacement Cost, the Renovation Cost is used.
- **** If the Condition Analysis Cost is over 50% of the Replacement Cost, a Renovation Cost is not included.
- ***** Renovation Cost includes Condition Assessment items and Renovation Cost to meet Army Lodging Standards.

Cost per Room Comparison

The Wellness Recommendation includes review of off-post Lodging costs compared to the proposed renovation and new construction costs on post. The renovation and new construction costs include operating costs, capital assessment costs, and sustainment capital expenditures. The following table summarizes this comparison per room for FY08.

	Renovation	New Building	Total
Cost per Room at Fort Belvoir	\$ 63.51	\$ 72.67	\$ 67.01
Off Post Cost per Room	\$ 106.20	\$ 106.20	\$ 106.20
Difference between On-Post and Off-Post Lodging per room	\$ 42.69	\$ 33.54	\$ 39.19
% Savings of On-Post to Off-Post Lodging	40.2%	31.6%	36.9%

The Cost Per Room at Fort Belvoir is based on:

Renovation / New Construction Cost w/ inflation to FY 08

Current Operating Cost w/ inflation to FY 08

Cap Ex Cost

Capital Assessment Cost to FY 08

Off Post Cost is based on current room rate average with inflation to FY 08

Due to this cost difference and the savings of 36.9%, it is our recommendation that the Army construct a new Lodging facility and retain five existing facilities at Fort Belvoir in lieu of using off-post lodging to support the determined demand requirement. Off-post lodging will continue to be used for demand beyond the on-post room requirement.

Recommendations / Conclusions

The Wellness Recommendation for Fort Belvoir is to construct a new 216 room main Lodging facility on-post as well as retain five existing facilities for a total of 565 rooms, to meet the 559 room requirement. The number of rooms for the New Proposed Lodging Facility reflects the proposed layout and does not match the exact Demand numbers, because of building configuration. A long term recommendation (FY18) is to construct an addition to this new Lodging facility to replace the existing 337 rooms. Building 470 which now serves as the main Lodging facility will be retained as a secondary facility. Existing Lodging facilities that do not meet condition and functional requirements based on cost shall be removed from the Lodging inventory. A synopsis of recommended building actions follows:

- Construct a new Lodging facility prior to removing existing Lodging facilities from inventory and removing main Lodging support spaces from building 470.
- Retain building 470 as a secondary facility. Renovate based on condition and functional requirements. Existing public and back-of-house spaces to reflect the requirement for a secondary facility, removing functions that will be incorporated into the new main Lodging facility.

- Retain buildings 507, 508, and 509 based on current condition and configuration. Renovate based on condition assessment and functional requirements.
- Building 20B will be retained with 12 family suites. Renovate based on condition assessment requirements.

Cost Summary

The cost for this recommendation will be:

Renovation of buildings 20B, 470, 507, 508, and 509	\$10,461,815
New Lodging Facility	\$24,228,280
Total	\$34,690,095

The Cost for the future addition is estimated at \$31,885,745 in FY18, using inflation rates in accordance with the most recent version of the Economic Analysis for MILCON updated 2 December 2002 located at www.hq.usace.army.mil/

Phasing

Recommend the following phasing as funding is identified.

- Minimize investment in infrastructure for buildings 80, 81, 172, 505, 506, 806, and 807.
- Construct new Lodging facility prior to removing existing Lodging facilities from inventory.
- Renovate existing facilities 20B, 470, 507, 508, and 509.
- Remove buildings 80, 81, 172, 505, 506, 806, and 807 from Lodging inventory.

Section 2 Lodging Master Plan



Fort Belvoir, located in Fairfax County, Virginia, is part of the Military District of Washington, providing essential administrative, logistical and contingency support to the nation's capital. Initially constructed in 1935, the fort served as home to the Army's Engineer School until 1989, providing training to more than 700,000 officers and enlisted soldiers until 1989.

Fort Belvoir, the Engineer Proving Grounds (EPG), and Humphreys Engineer Center (HEC) together contain over 1,500 facilities on 9,239 acres along the western bank of the Potomac River. The Fort Belvoir Installation Guide, completed in 1995, incorporates specific installation requirements for Fort Belvoir and HEC, located on adjacent property operated by the Corps of Engineers. The 820 acres of EPG, a portion of Fort Belvoir separated from the main installation by about 2 miles, is not included because development is being planned under a separate Army program.

The Fort Belvoir Installation Design Guide incorporates specific installation requirements. Land use, future development, and architectural compatibility are integral components of the Guide. Current lodging room night requirements, Army guidance on lodging facility design standards, and force protection construction standards required additional analyses and were incorporated into the recommendations of this Lodging Wellness Plan.

The character of Fort Belvoir has been preserved and enhanced through the predominant use of brick, medium to low sloped roofs, and limited exterior openings on the building facades, often shaded by overhangs or balconies.

Master Plan Summary

Lodging facilities at Fort Belvoir were constructed in various phases and located in several areas of the installation. A thorough condition and functional assessment of the existing buildings noted significant deficiencies. Additionally, renovation of these buildings to the new Army Lodging standards and room configuration is not viable within the 50% threshold.

The proposed Fort Belvoir Lodging Master Plan reflects a 565 room count based on the demand of 559 rooms, with an initial replacement of approximately 40% of the existing Lodging buildings into a new main Lodging facility. The number of rooms for the new proposed Lodging facility reflects the proposed layout and does not match the exact demand numbers, because of building configuration.

This new facility, in conjunction with five existing Lodging facilities will combine required rooms, public areas and service functions into a cohesive Lodging physical plant in support of the installation requirements. The existing main Lodging facility, Building 470, is located along the eastern edge of the installation, in close proximity to a majority of the community facilities. Building 470 will be converted to a secondary facility. Buildings 20B, 507, 508 and 509, will be retained as well, based on current condition and configuration. Renovation for these remaining buildings will be limited, but will include more than minor cosmetic upgrades.

Siting of the new main Lodging facility is recommended to be located centrally on the installation across from the parade field and golf course. This plan recommends retaining the rooms in buildings 470, 507, 508, and 509 for the next 15-20 years, based on current condition and configuration, and limiting renovation work to remove back-of-house and public spaces no longer required after a new Lodging facility is constructed. The Lodging Master Plan does include a long term addition to the new Lodging facility to replace these Lodging rooms when it is deemed these buildings are beyond their useful life (FY18).

Existing Lodging Facilities



Lodging Building 20B

Building 20B, constructed in 1974, is connected directly to the Officer's Club. This building has been recently renovated and now serves as DVQ's for visiting officers. The north wing houses 4 one-bedroom guest rooms, and the south wing houses 8 one-bedroom guest rooms. These facilities are in excellent condition and meet current Lodging standards as family rooms.

Our recommendation is to retain building 20B within the Fort Belvoir Lodging inventory. This facility will remain in the Fort Belvoir Wellness Solution Lodging Master Plan.



Lodging Buildings 80 and 81

Buildings 80 and 81, constructed in 1948, have been upgraded and renovated in recent years. The two 2-story buildings are mirror images of each other and contain 47 rooms. Building 80 has 44 rooms functioning as standard room, and building 81 has 45 rooms functioning as standard rooms, each with shared baths. Both of these buildings are in poor condition and do not meet current Lodging standards. The cost to make condition assessment improvements will exceed the 50% replacement cost.

Our recommendation is to remove these buildings from the Lodging inventory, allowing the installation to determine an alternate use for the facilities. These facilities will be removed from the Fort Belvoir Wellness Solution and Lodging Master Plan.

Lodging Building 172



Building 172, constructed in the 1950's, received a major renovation in 2000. This building presently has one bedroom and serves as a DVQ. The building is in good condition but does not currently meet the Army Lodging standards. The cost to make improvements and to bring the facility up to Army Lodging standards will exceed the 50% replacement cost.

Our recommendation is to remove this building from the Lodging inventory, allowing the installation to determine an alternate use for this facility. This facility will be removed from the Fort Belvoir Wellness Solution and Lodging Master Plan.



Lodging Building 470

Building 470, Knadle Hall, constructed in 1975, currently houses 219 extended stay rooms, six of which are used as DVQ's. The building has two 5-story wings and serves as the primary lodging facility.

This building infrastructure is to be used over the next 15-20 years with normal maintenance, and renovated based on condition and functional requirements. Based on age of the structure, however, we do not recommend significant renovations to the public spaces and/or back-of-house space to meet functional criteria. These support spaces will instead be reconfigured to meet secondary facility functional requirements.

Our recommendation is to retain building 470 in the Fort Belvoir Lodging inventory. This facility will remain in the Fort Belvoir Wellness Solution and Lodging Master Plan.



Lodging Building 505 and 506

Buildings 505 and 506, constructed in 1956, are similar. Building 505 includes 45 rooms consisting of 32 one-bedroom guest rooms with shared baths and 13 two-bedroom, one bath guest rooms. Building 506 houses 60 rooms of which 29 are guest rooms comprised of two-bedroom, one bath rooms.

These buildings are in fair condition but do not meet the Lodging size requirements. The cost to modify to meet Army Lodging standards will exceed the 50% replacement cost.

Our recommendation is to remove these buildings from the Lodging inventory, allowing the installation to determine an alternate use for the facilities. These facilities will be removed from the Fort Belvoir Wellness Solution and Lodging Master Plan.



Lodging Buildings 507, 508 and 509

Buildings 507, 508 and 509, constructed in 1969, are 2-story facilities, similar in construction and appearance, and have recently been renovated. Buildings 507 and 508 each consist of 42 rooms comprised of 38 extended stay rooms and 4 family suites. Building 509 consists of 32 extended stay rooms and 3 family suites. All three of these buildings are in good condition and meet the Lodging size requirements. The buildings are lacking some of the back-of-the-house and public functions. These areas are incorporated into the renovations plans.

Our recommendation is to retain buildings 507, 508, and 509 in the Fort Belvoir Lodging inventory. These facilities will remain in the Fort Belvoir Wellness Solution and Lodging Master Plan.



Lodging Buildings 806 and 807

Buildings 806 and 807, constructed in the 1960's, have been recently renovated. Building 806 is a 2-story building with 9 two-bedroom rooms with one bath and kitchen. Building 807 is a similar two-story building with 12 two-bedroom guest rooms and 4 one-bedroom guest rooms, each with one bath and kitchen. Both of these buildings are in good condition but do not meet current Lodging standards. The cost to make improvements and to bring up to Army Lodging standards will exceed the 50% replacement cost.

Our recommendation is to remove these buildings from the Lodging inventory, allowing the installation to determine an alternate use for the facilities. These facilities will be removed from the Fort Belvoir Wellness Solution and Lodging Master Plan.

New Lodging Building

The proposed replacement/new main Lodging building includes 216 rooms: 72 standard guest rooms, 120 extended stay guest rooms, and 24 family suites. The building is arranged in a modified “H” configuration with the two Southeast wings and end rooms of the other 6 wings designated as the future expansion to replace the 337 rooms in buildings 470, 507, 508, and 509 in 15-20 years when replacement is required. The lobby and back-of-the-house spaces are sized for the 565 total Lodging rooms on the installation. Parking will be located to the southwest of the new facility, sited in accordance with force protection requirements.

Three distinct locations for this new facility siting were investigated; one location south of Tracy Loop, one location near Gunston Cove in Tompkins Basin, and one location near the Pence Gate. The recommended site for the new lodging facility is this last option on the north side of the installation, to the east of Pence Gate and to the south of Route 1. This location will allow guests to access the facility without entering the Installation. Installation security will be improved, and guests working at off-post locations will have easier access to this Lodging facility.

The proposed building construction is steel frame with CMU and glass curtain walls, sloped tile roof, and a brick exterior veneer. The architectural guidance for Fort Belvoir is incorporated into the cost of the new facility.

The mass and scale of the proposed building is critical. Based on the number of required rooms and to limit the length of the wings, the recommendation of this plan is to provide varying roof levels to promote interest and character, while providing relief from the scale of the facility. The core area would maintain a 4 story height, tapering to 3 stories and 2 stories on the wings, providing a pedestrian scale and emphasis for the families.

Areas and Occupancy

The following chart indicates all spaces and size for the proposed new construction based on program and the proposed conceptual building plan.

ROOM / SPACE	PROGRAMMED FLOOR AREA			PLAN FLOOR AREA
	No. Req'd	Net Area Per Room	Total Net Area	
Total Area including 9% Add On Factor (does not include Outside Areas)*			134,857	141,638
Public Areas			42,954	47,686
Exterior Entrance	N/A	N/A		-
Vestibule	1	1	-	-
Lobby (includes vestibule)	1	1,000-1,200	1,000-1,200	1,247
Front Desk	3 stations	250	250	300
Bell Cart Station	6	12	72	71
Breakfast Bar (Seat/Svc) - min.	1	550	550	673
Passenger Elevators	2 elev. @ 4 floors	64	512	516
Stairs	10	230	9,200	8,551
Public Corridors	-	-	28,000	28,005
Public Telephone Area	6	4	24	24
Vending - Full Service	2	70	140	801
Vending - Ice Only	2	30	60	237
Women - Lobby	1	315	315	261
Men - Lobby	1	315	315	261
Multi-Purpose Room - (250 s.f. min.)	1	250	250	384
Study Rooms (1 per 25 ext stay units)	5	250	1,250	3,939
Guest Laundries (2 sets w/d per 75 units)	3	192	576	1,696
Gear Wash Rooms - (170 s.f. min.)	-	170	-	-
Guest Bulk Storage (1 per 4 family suites)	6	25 ea. 40 w/circ.	240	720
Guest Rooms	216		68,400	68,400
Guest Room - Standard	72	300	21,600	21,600
Guest Room - Ext. Stay	120	300	36,000	36,000
Guest Room - Family Suites	24	450	10,800	10,800
Back-of-House Areas			12,368	18,735
Manager's Office	1	180	180	180
Assistant Manager Offices	1	120	120	129
Front Office Manager	1	100	100	111
Admin. Offices	7 staff	800-900	800-900	844
Cash Room	1	125	125	126
Luggage Storage	1	100	100	108
Admin. Conference Room	1	350	350	384
Housekeeping Office	1	120	120	150
Dirty/Clean Linen Storage	-	200	-	-
In-House Laundry - (500 s.f. minimum)	1	750	750	751
Receiving Office	1	75	75	100
Maintenance Area	1	400	400	399
Kitchen Prep Room	1	150	150	170
Break Room	1	350	350	347
Staff Toilet - Men	1	150	150	100
Staff Toilet - Women	1	200	200	100
Access Corridor	-	-	630	631
Receiving - min.	1	150	150	275
Housekeeping Rooms	1 per 15 units	128	1,920	4,614
Service Elevator	1	80	320	332
Data/Commo Room	1	150	150	149
Switch Closets	5	16	80	1,704
Janitor Closet	1	50	50	108
Mechanical Room	-	-	3,354	3,693
General Storage Room - (500 s.f. min.)	1	500	500	1,389
Bulk Storage Room - (500 s.f. min.)	1	500	500	687
Electrical Room	4	140	560	1,084
Elevator Equipment Room	1	84	84	70
Exterior			400	
Playground (Outdoor)	1	-	-	-
Grounds Maintenance	1	400	400	-

* Add on factor to cover s.f. for partitions and any space not included in numbers above.

Cost Summary

The New Construction Cost \$24,228,280

- All costs are adjusted by the Area Cost Factor of 100% for Fort Belvoir.

Cost Analysis

Summary of Project Replacement Cost (based on 141,638 s.f.)

CSI	Percent	Amount
02 Site Work	2.57%	\$420,597.00
Parking Lots		\$180,880.00
Site Earthwork		\$239,717.00
03 Concrete	24.21%	\$3,961,200.16
Floor Construction		\$2,985,450.16
Slab on Grade		\$177,510.00
Stair Construction		\$88,200.00
Standard Foundations		\$710,040.00
04 Masonry	4.09%	\$668,569.09
Exterior Walls		\$668,569.09
07 Thermal & Moisture Protection	4.89%	\$800,123.17
Roof Construction		\$364,671.40
Roof Coverings		\$435,451.77
08 Doors & Windows	7.10%	\$1,162,343.00
Exterior Doors		\$26,981.00
Exterior Windows		\$904,000.00
Interior Doors		\$231,362.00
09 Finishes	17.86%	\$2,923,080.37
Ceiling Finishes		\$922,155.64
Floor Finishes		\$1,010,528.70
Partitions		\$552,134.99
Wall Finishes		\$438,261.04
10 Specialties	0.02%	\$3,389.50
Fittings		\$3,389.50
11 Equipment	1.86%	\$305,034.50
Commercial Equipment		\$15,125.00
Other Equipment		\$289,909.50
13 Special Construction	5.22%	\$854,888.16
Communications & Security		\$384,841.68
Sprinklers		\$470,046.48
14 Conveying Systems	1.31%	\$214,800.00
Elevators and Lifts		\$214,800.00
15 Mechanical	17.22%	\$2,818,219.44
Cooling Generating Systems		\$1,658,653.44
Domestic Water Dist		\$260,400.00
Plumbing Fixtures		\$899,166.00
16 Electrical	7.04%	\$1,152,574.00

Electrical Service & Distribution		\$1,145,989.00
Site Lighting		\$6,585.00
19 FF&E	6.60%	\$1,080,000.00
Interior FF&E allowance		\$1,080,000.00
Total Raw Cost	100.00%	\$16,364,818.3
Additional Hard Cost (Template: Army Lodging New Construction)		
Parameter Name	Percent	Amount
Spirit	0.50%	\$90,006.50
Force Protection	0.00%	\$0.00
General Conditions	10.00%	\$1,636,481.8
Total Additional Hard Cost		\$1,726,488.34
Soft Cost (Template: Army Lodging New Construction)		
Parameter Name	Percent	Amount
Contingency	5.00%	\$904,565.34
SIOH Conus	6.50%	\$1,234,731.68
Design	10.00%	\$1,809,130.67
08 MYr Inflation Fct	9.93%	\$2,188,545.63
Total Soft Cost		\$6,136,973.32
Total Project Cost for Replacement		\$24,228,280.05

INSERT PROPOSED CAMPUS AREA ANALYSIS DRAWING HERE

INSERT LODGING MASTER PLAN DRAWING HERE

INSERT **PROPOSED LODGING FACILITY (FLRS. 1-3)** DRAWINGS HERE

Overview

Section 3 Demand Analysis

Fort Belvoir, because of its strategic location in proximity to Washington, DC, houses tenants from all armed forces as well as the Department of Defense Acquisition University and the Defense Mapping School. Fort Belvoir's primary mission is to provide logistical and administrative support to 90 tenant and satellite organizations. This 8,600-acre installation is a self-sustained community with its own ordinances, land use plan, building codes, utilities, parks, and academic institutions.

The installation's population grew about 29% over the last five years, primarily in non-military positions having little impact on the installation's lodging demand. Fort Belvoir's military population was generally consistent over the last five years with limited growth in 2000.

The installation's training mission is the primary driver for the installation lodging facilities demand. Fort Belvoir experienced a slight decline in 2001 and 2002 due to a reduction in classes offered, smaller class sizes and shorter class lengths. With this training focus, 85% of the demand comes from Temporary Duty (TDY) personnel. Some classes last at least twelve weeks, and 58% of TDY personnel stay more than 14 days. Fort Belvoir averages 27 Permanent Change of Station (PCS) rooms per night, about 7% of the total lodging room demand. The remaining demand is unofficial demand which is not used in the calculation of recommended optimum room inventory. The table below describes the official demand population at this installation.

Fort Belvoir Official Market Demand Analysis		
	TDY	PCS
Total Demand:	85%	7%
Market Segmentation:		
Individuals	100%	< 10%
Families	0%	> 90%
Average Length of Stay (Days):		
14 days or less	42% (4 days)	71% (5 days)
More than 14 days	58% (59 days)	29% (26 days)

Source: Fort Belvoir Lodging Administration, compiled by 3/DI

On Post Inventory

Fort Belvoir has 575 rooms in 12 buildings; 121 have shared bathrooms.

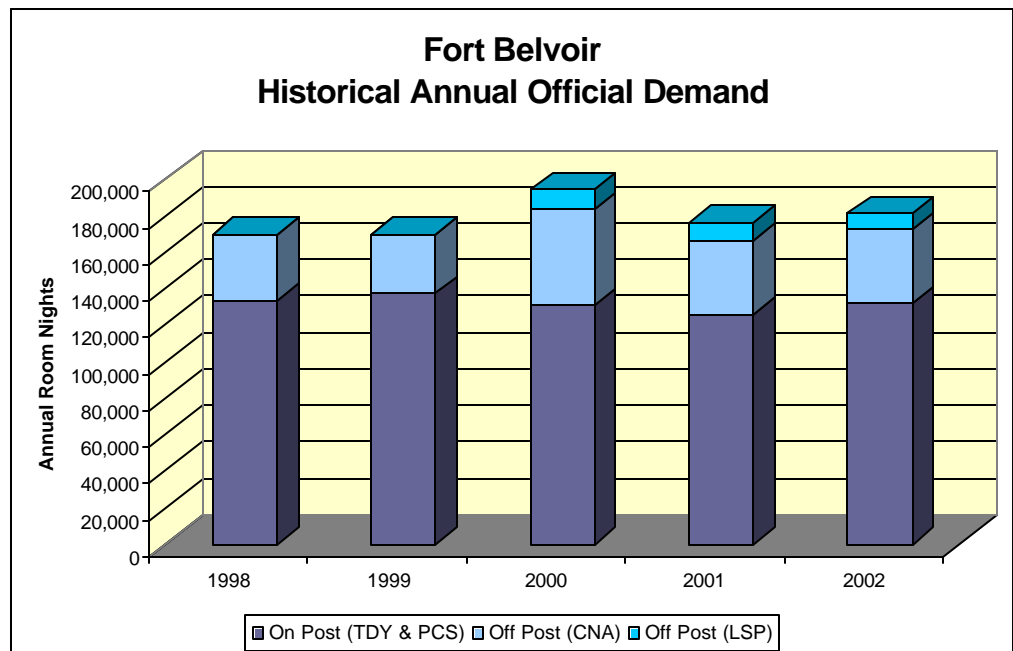
Demand and Utilization

Data Summary

From 1998 to 2002, demand, inclusive of Certificates of Non-Availability (CNAs), ranged from 465 to 534 room nights per day. The 2000-2002 average was 504 rooms per nights per day. Annual official demand was fairly consistent over the last five years; fluctuating between 169,000 and 195,000 room nights with demand falling to 180,000 room nights in 2002.

CNAs were between 88 and 101 room nights per day in 1998 and 1999, peaked at 144 room nights per day in 2000, and then trended downward to 110 room nights per day in 2001 and 2002. The preceding three-year average is approximately 122 CNAs per day.

The chart below summarizes historical data and identifies the annual official demand both on and off post.



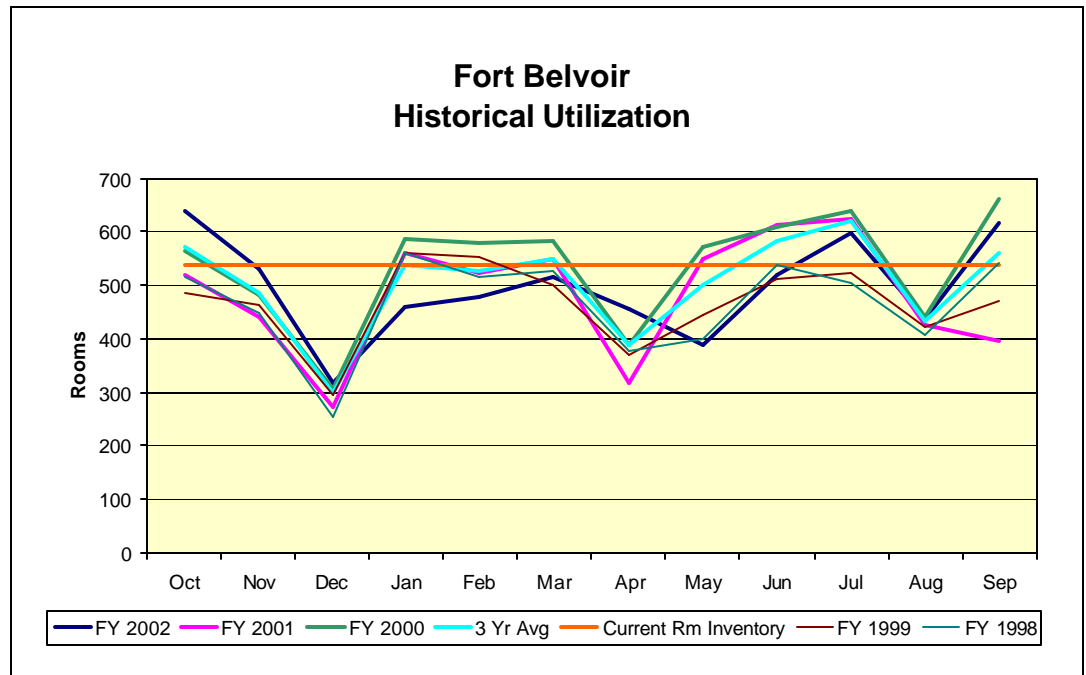
Source: Fort Belvoir Lodging Administration, compiled by 3/DI

Occupancy percentages were less consistent than demand, ranging from 70% to 80%. Part of this variance was due to the lower number of

available rooms in 1998 and 1999. If we review the overall five year demand based on the current number of available rooms, occupancy becomes more consistent at rates of 70% to 77%.

The annual occupancy rate is skewed by the three exodus months of December, April, and August. This suppresses the overall demand and occupancy.

The following chart summarizes historical utilization data by month.



Source: Fort Belvoir Lodging Administration, compiled by 3/DI

History revealed relatively insignificant monthly variances between years and a consistent demand pattern from month to month.

Seasonality

Fort Belvoir's demand cycle history evinces limited, but predictable seasonality. Training typically generated three peaks: January through March; May through July; and September through November. Similar to most training locations, a major exodus occurs at completion of a training session, and December demands slumped even further. The average number of rooms per night during training periods was in the mid to upper 500s, peaking in June and July to between 581 and 620. During exodus periods, the average dropped to 435 rooms in August, 388 in April, and 298 in December. Occupancy was very consistent otherwise.

Factors Influencing Demand

Fort Belvoir plans new training programs for 2003 and 2004. Projections show a 6% growth in training population in 2003 with nominal growth in subsequent years.

Recently, Concepts Analysis moved onto the installation and is included as part of the 2002 population growth.

There is a significant demand for Family Housing at Fort Belvoir. For example, Army personnel with a rank of SFC and higher have a wait time of 4 to 30 months for a three or four-bedroom unit. The installation has 2,070 family housing units and plans to add 998 housing units over the next two years to reduce the average length of stay associated with PCS demand.

Considering the time to construct new housing, backlog is likely to increase. These factors influence the room mix. Due to low availability of on-post housing, PCS families typically stay in lodging for 30 days and may request an extension of 15 to 30 days while they secure rental properties or purchase a home.

While the installation appears to have close to the number of rooms it needs to meet overall demand, 121 rooms still have shared baths. Due to restrictions related to rank or gender differences it is estimated only 50% of those units are useable concurrently.

Private Market Capability

The commercial lodging market within a 30-minute rush-hour driving time radius of the installation offers 142 properties consisting of 17,705 rooms. Approximately 58% of these properties are major lodging chains. There are no other military lodging operations within this radius.

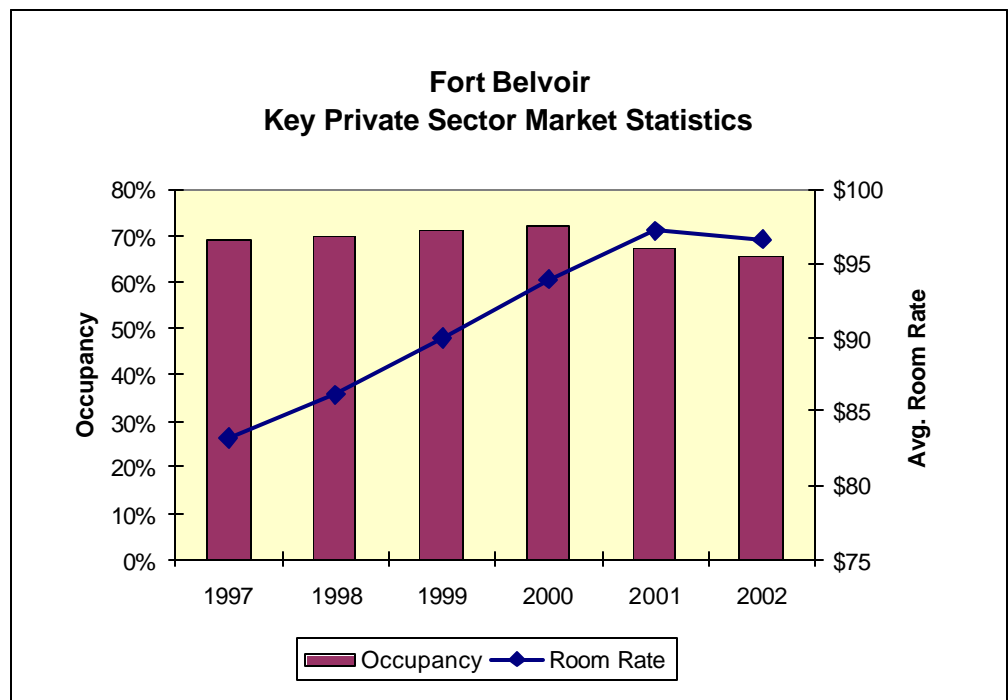
The off-post market is in a state of equilibrium; average daily rate and occupancies are sufficient to justify new construction as additional demand is generated. The next graph demonstrates occupancy was fairly consistent over the last five years with a slight decline in 2001 and 2002.

A review of the monthly occupancies of the major hotel chains immediately around Fort Belvoir suggests that, while there are not any seasonal peaks of demand that would negatively impact the ability of the installation to lodge personnel off post, there is a predictable downturn in lodging demand during the winter months.

The private sector Average Daily Rate (ADR) increased approximately 16% in the last five years. The overall 2002 market area ADR of \$96.61 is lower than the \$108.87 average government rate charged to military personnel staying off post at the 23 referral properties. These rates are well below Fort Belvoir's \$150 per diem.

Additionally, Fort Belvoir has access to the Hilton Springfield, part of the Lodging Success Program (LSP). LSP contract hotels are considered government quarters and the first choice of off-post lodging if on-post rooms are allocated. The Central Reservations Center (CRC) processes LSP lodging reservations. If rooms are unavailable at the LSP site, CRC issues a CNA for personnel to seek lodging at other area motels. Due to its proximity to the Pentagon and other government facilities, the Hilton Springfield has many Army patrons who are not directly connected to Fort Belvoir; it was not possible to isolate these numbers reliably. The Hilton is not figured in the room mix but rather as part of the overflow solution. The Hilton Springfield LSP rate is \$99.50.

The next chart describes key private market statistics.



Source: Smith Travel Research, compiled by 3/DI

In summary, it is reasonable to assume from the data that—although some off post facilities are older, of lesser quality, and offer limited amenities—the private market does have sufficient capacity to support

the overflow lodging requirements that Fort Belvoir personnel may encounter.

Demand Requirement Determination

As discussed previously, there is a projected population growth of 6% in 2003, with nominal growth expected in subsequent years. There are some weekly and seasonal swings in utilization.

Based on these factors, the average demand for the last three years, after normalization, is the best indicator of future demand. The normalization process eliminates monthly demand peaks or valleys where official demand is 20% greater or 20% less than average demand for 2000 through 2002. Variances greater or less than 20% of the average are atypical and unlikely to recur. For Fort Belvoir, normalization increases demand in one month by 53 rooms.

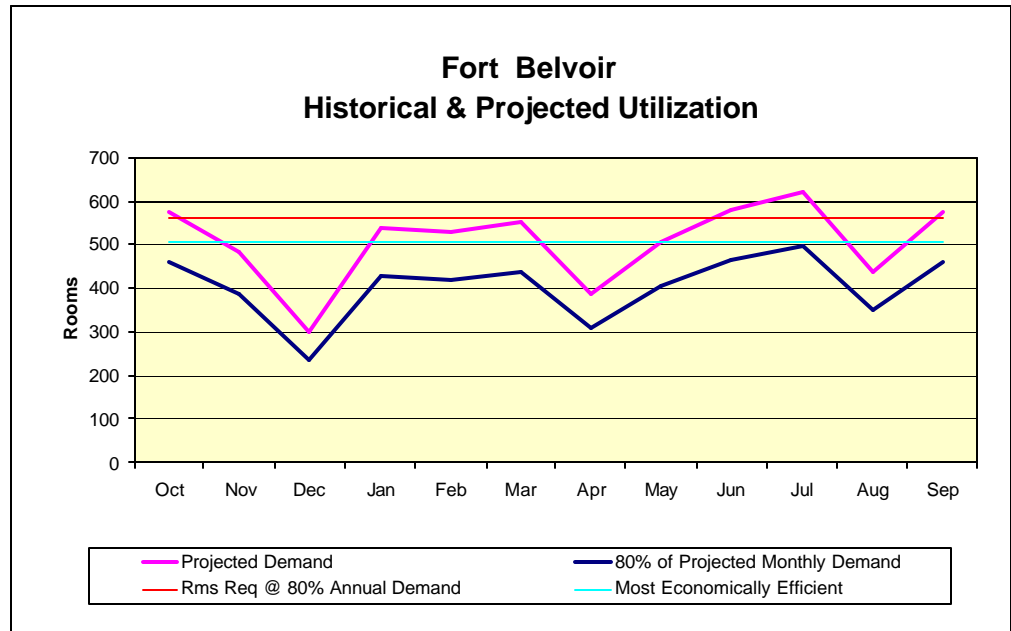
The Core Lodging Requirement objective is to provide sufficient lodging to meet 80% of the official demand. Using this criterion, the total number of rooms required on an annualized basis is 559, generating occupancy of 83%. This recommendation is supported by the desire to lodge classes of trainees/students together near their training site; the high percentage of rooms utilized by the students; and the high degree of demand predictability. Applying the 80% criterion minimizes the risk of creating too many vacancies, increasing off post demand, and potentially giving rise to an increase of the off-post ADR.

Despite a the significant demand reduction in December and to a lesser degree in April and August, we are not recommending the 592 rooms at "80% of Annual Demand Without Exodus Months." While not excluding short-term TDY personnel lodging demand, the post's primary mission is supporting students participating in training programs, and Lodging supports that mission. Additionally, if we used the "80% of Annual Demand Without Exodus Months" criterion, the targeted occupancy would be 592 room or 85%, a rate historically higher than that achieved over the past five years.

Another factor in determining the number of rooms to be provided at the installation is the application of the "Most Economically Efficient" number of rooms criterion.. This measure compares the cost of having a vacant room to the incremental cost of lodging personnel off post. When the costs of these scenarios are at equilibrium, the most cost efficient number of rooms will be provided from an operating cost perspective. The

number of rooms required to achieve equilibrium for Fort Belvoir is 502 rooms; this generates an expected occupancy of 84% with 72% of the official demand being met.

The following chart compares pertinent potential alternatives to room inventory to the projected demand.



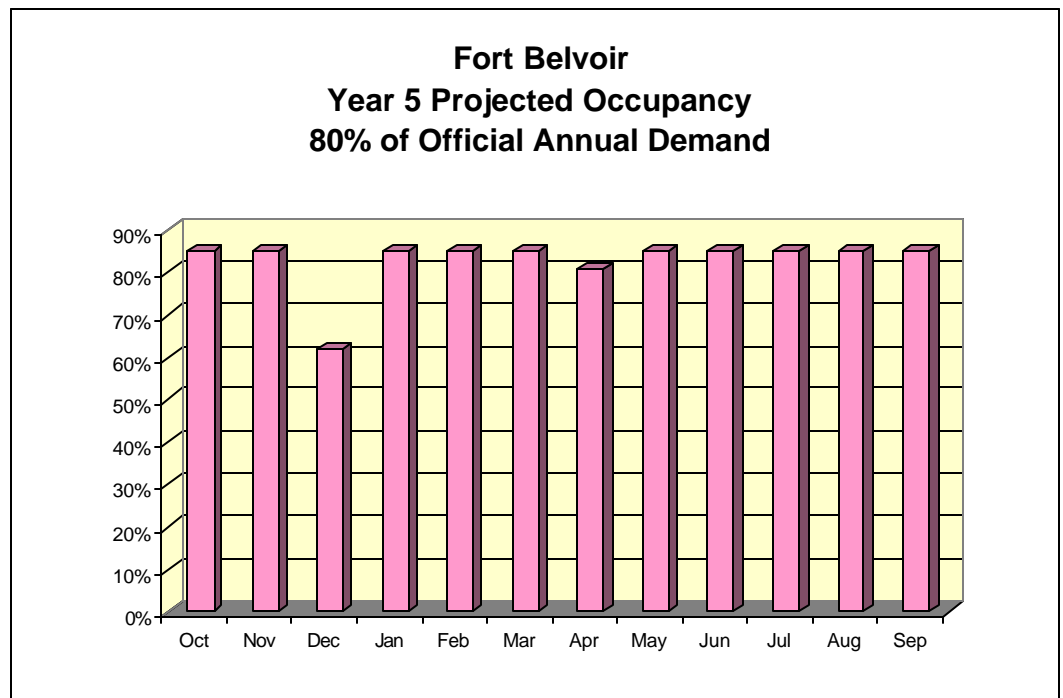
Source: Fort Belvoir Lodging Administration and 3/DI

We do not recommend the most economical number because it only meets 72% of official demand and does not allow for growth or peak demand periods. That number of rooms would not have met the installation's demand over the past three years for 7 out of 12 months. During periods of sustained high occupancy levels--particularly during summer months--management would be forced to send more than 100 room nights off post each day.

The consistent demand for lodging throughout the remainder of the year makes it more cost effective to lodge personnel on post rather than sending them off post. If the "Most Economical" demand criterion is used, 54 fewer rooms would be provided for and 19,710 additional room nights would be sent off post. The cost of sending these rooms off post with a \$150 per day lodging per diem or even the current average actual billing rate of \$108.87 is greater than the operating cost of providing those room nights on post.

The recommended number of 559 rooms is the most appropriate count for this installation. This recommended room count falls between the 592 suggested by using “80% of Annual Demand without Exodus” and the 502 suggested by the “Most Economical” model. It can achieve a desirable occupancy rate, and it factors in the practical value of keeping long-term students on post for convenience and class integrity. An expected Average Daily Rate (ADR) of \$55.50 (in FY08 dollars) is forecast.

The chart below presents the expected occupancy percentage on a monthly basis.



Source: 3/DI

Using the “80% of Official Demand” criterion, the average occupancy is 83%, and 80% of the official demand is met. On a monthly basis, occupancy has a variance from 62% in December to the low 80% range in the remaining months of the year.

Summary and Recommendation

- Fort Belvoir’s population grew 29% over the last five years. However, past growth was primarily in non-military positions which had little impact on the installation’s Lodging demand

- The Lodging demand is primarily driven by educational and training activities
- The proceeding three-years averaged 122 CNAs room nights per year
- It is highly advantageous to be able to house as many students as possible on the installation for logistics and class affiliation
- While Fort Belvoir's lodging inventory appears to meet the number of rooms needed to meet overall demand, 121 of the existing rooms have shared baths. Due to restrictions related to rank or gender differences, reality rules, and at any one time only 50% of those rooms will be used
- The local private sector lodging market is strong and has the capacity to house demand overflow
- Official demand was fairly consistent over the last five years
- The existing demand justifies providing a room inventory higher than the Most Economical Demand, but lower than the 80% Demand with Exodus.

Room Count and Mix Recommendation

- 559 rooms
- Proposed room mix:
 - 73 standard guest rooms
 - 444 extended-stay guest rooms offering a kitchenette
 - 42 extended-stay family suites offering a separate bedroom, sitting/living area, and kitchenette

Section 4 Facility Assessment and Plans

Each Lodging facility on post is detailed in this section of the report. The outline of the detail is described below:

- **Summary of Existing Lodging Facility**
- **Significant Assumptions**, identifies criteria used for renovation / replacement cost models.
- **Cost Analysis**, summarizes recommendation based on cost.
- **Attributes**, describes number of rooms and configuration.
- **Condition Analysis and Recommendations** for each of the major systems of the building.
- **Major Functional Criteria Deficit**, describes any major Functional inadequacy based on Army standards.
- **Condition Assessment / Renovation / Replacement Analysis**
 - **Condition Assessment**, summarizes building system deficiencies grouped by CSI with additional hard cost and soft cost.
 - **Renovation**, summarizes building system costs plus functional renovation costs grouped by CSI with additional hard cost and soft cost.
 - **Replacement**, summarizes replacement cost grouped by CSI with additional hard cost and soft cost.

Special Note, if a building is being retained based on the Wellness Recommendation, and has some renovations in order to meet Army Lodging standards, two cost models are used. The Condition Cost is used for wellness items and the Renovation Cost for functional renovations. These two cost need to be added together for the full renovation cost.

On this installation the following buildings use both cost models for the total renovation.

- Building 470
- Building 507
- Building 508
- Building 509



Building 20B

Building 020B

Building 20B was constructed in 1974 as part of the Officer's Club. The 6,000 square foot facility contains 12 lodging units functioning as 12 DVQs.

Significant Assumptions

The replacement cost model is based on 12 family suites.

The renovation plan was not required because existing spaces meet current size requirements and the current building is in good condition to meet lodging requirements.

The replacement cost model includes any public or back-of-the-house spaces as outlined in the Areas and Occupancies Schedule Template included in the Appendix.

All costs are adjusted by the Area Cost Factor of 100% for Fort Belvoir.

Cost Analysis

Condition Assessment Cost	\$206,310.00
Replacement Cost	\$1,405,330.00
Condition Assessment to Replacement Cost Ratio	14.68%

Because the Condition Assessment to Replacement Cost Ratio is less than 50%, repair and continued use of Building 20B is recommended.

Attributes

01.Number of Units Constructed	12
02.Number of Units Used	12
03.Back of House Function	No
04.Single Room w/o FullKitchen	0
05.Single Room w/ Full Kitchen	0
06.Multi Room wo/ Full Kitchen	0
07.Multi Room w/ Full Kitchen	0
08.DVQ wo/ Full Kitchen	0
09.DVQ w/ Full Kitchen	12
10.Operating as Standard Room	0
11.Operating as Extended Stay	0
12.Operating as Family Suite	12
13.Renovated to Standard	0
14.Renovated to Extended Stay	0
15.Renovated to Family Suite	0
16.Delta renovation	0

Condition Analysis/Recommendation

FF&E

FF&E Allowance

- Analysis: The FF&E within the suites are in fair condition.
- Recommendation: Replace the FF&E.

Foundations

Standard Foundations

- Analysis: The structural foundation, given its proximity to the Potomac River, is probably on driven piles with pile caps. The structure is one of reinforced concrete of beam and post design with concrete floors. No visible flaws were observed.
- Recommendation: No corrective action required.

Slab on Grade

- Analysis: The slab on grade appears to be in good condition with no visible signs of failure.
- Recommendation: No corrective action required.

Superstructure

Floor Construction

- Analysis: The elevated floors are reinforced concrete in good condition.
- Recommendation: No corrective action required.

Roof Construction

- Analysis: The roof construction is one of sloped slate roof on a wood substrate. The roof is an original system that was installed when the club was constructed. The slate roofs have an extended life span. This roof is in good condition.
- Recommendation: No corrective action required.

Exterior Enclosure

Exterior Walls

- Analysis: The exterior of Building 020 B is brick which is in good condition.
- Recommendation: No corrective action required.

Exterior Windows

- Analysis: The exterior windows are double hung, single pane glazing which are in fair condition.
- Recommendation: The windows should be replaced with energy efficient thermo-pane windows.

Exterior Doors

- Analysis: The exterior solid core wood doors appear to be original and are in fair condition.
- Recommendation: Replace the doors and hardware in the existing frame.

Roofing

Roof Coverings

- Analysis: The roof is in good condition
- Recommendation: No corrective action required.

Interior Construction

Partitions

- Analysis: The interior partitions are drywall on studs which are in good condition.
- Recommendation: No corrective action required.

Interior Doors

- Analysis: The doors are in good condition.
- Recommendation: No corrective action required.

Interior Finishes

Wall Finishes

- Analysis: The units have vinyl wall coverings. They are in fair condition.
- Recommendation: Replace the wall coverings.

Floor Finishes

- Analysis: The carpet is in fair condition and is in fair condition.
- Recommendation: Replace the carpet.

Ceiling Finishes

- Analysis: The ceilings are painted drywall in fair condition.
- Recommendation: Paint the drywall ceilings.

Plumbing

Plumbing Fixtures

- Analysis: The plumbing fixtures are in good condition.
- Recommendation: No corrective action required.

Domestic Water Distribution

- Analysis: The domestic water system is tied to the officers club and is in good condition.
- Recommendation: No corrective action required.

HVAC

Cooling Generating Systems

- Analysis: The current system is fed from the officer's club and is in good condition.
- Recommendation: No corrective action required.

Fire Protection

Sprinklers

- Analysis: The building is fully sprinkled and in good condition.
- Recommendation: No corrective action required.

Electrical

Electrical Service/Distribution

- Analysis: The electrical service is fed from officer's club. The system is in good condition.
- Recommendation: No corrective action required.

Communications and Security

- Analysis: The fire alarm consists of strobes and bells located in the stair wells in conjunction with exit signs. The system is in good condition
- Recommendation: No corrective action required.

Equipment

Other Equipment

- Analysis: The unit has a galley kitchen which has full size refrigerator, cook top and micro-wave. They are in good condition.
- Recommendation: No corrective action required.

Site Preparation

Site Earthwork

- Analysis: The site is in good condition.
- Recommendation: No corrective action required.

Major Functional Criteria

Major Functional Criteria Analysis

The following are existing conditions that do not meet the Functional Criteria and are considered major deficits. Listed are the recommendations or solutions for remedying each deficit.

- **Back-of-House Spaces**

Most of the back-of-the-house spaces are required at the main lodging building on post. Presently these are located in building 470, and are not included in this building.

- **Public Spaces**

Most of the back-of-the-house spaces are required at the main lodging building on post. Presently these are located in building 470, and are not included in this building.

Condition Assessment/Renovation/Replacement Analysis

Condition Assessments

The Condition Assessment Cost lists what is required to make the building well as it is currently functioning. The cost includes all deficient items based on our field observation and using the Army Lodging standard Cap Ex replacement schedule.

Summary of Project Cost

CSI	Percent	Amount
08 Doors & Windows	8.43%	\$10,325.48
Al. Windows - Beyond Useful Life		\$1,255.08
Exterior Steel Door - Beyond expected useful life		\$9,070.40
09 Finishes	35.15%	\$43,056.36
Carpet: Beyond Useful Life		\$16,041.53
Interior ceilings: Paint Failing		\$960.43
Vinyl Wall Covering: Beyond expected useful life		\$26,054.40
15 Mechanical	7.44%	\$9,108.00
Hydronic heater: Beyond expected useful life		\$9,108.00
19 FF&E	48.98%	\$60,000.00
Hard and soft goods: Beyond expected useful life		\$60,000.00
Total Raw Cost	100.00%	\$122,490.00

Additional Hard Cost (Template: Army Lodging Renovation)

Parameter Name	Percent	Amount
Spirit	0.50%	\$673.70
Force Protection	9.00%	\$12,187.14
General Conditions	10.00%	\$12,249.00
Total Additional Hard Cost		\$25,109.84

Soft Cost (Template: Army Lodging Renovation)

Parameter Name	Percent	Amount
Contingency	10.00%	\$14,759.98
SIOH Conus	6.50%	\$10,553.39
Design	10.00%	\$14,759.98
08 MYr Inflation Fct	9.93%	\$18,635.95
Total Soft Cost		\$58,709.30
Total Project		\$206,309.14

Replacement

The Replacement Cost is the cost to rebuild the units as part of a new facility including the appropriate back-of-house and public spaces. This cost is based on number and types of units in the renovation model.

Summary of Project Replacement Cost

CSI	Percent	Amount
02 Site Work	5.67%	\$53,835.50
Site Earthwork		\$53,835.50
03 Concrete	12.60%	\$119,640.00
Floor Construction		\$40,000.00
Slab on Grade		\$39,820.00
Standard Foundations		\$39,820.00
04 Masonry	7.80%	\$74,029.24
Exterior Walls		\$74,029.24
07 Thermal & Moisture Protection	12.78%	\$121,293.06
Roof Construction		\$23,042.06
Roof Coverings		\$98,251.00
08 Doors & Windows	9.31%	\$88,381.00
Exterior Doors		\$6,165.00
Exterior Windows		\$64,000.00
Interior Doors		\$18,216.00
09 Finishes	14.88%	\$141,206.23
Ceiling Finishes		\$23,175.24
Floor Finishes		\$40,447.82
Partitions		\$40,396.61
Wall Finishes		\$37,186.56
11 Equipment	4.42%	\$42,000.00
Other Equipment		\$42,000.00
13 Special Construction	5.05%	\$47,943.28
Communications & Security		\$21,582.44
Sprinklers		\$26,360.84
15 Mechanical	13.82%	\$131,212.00
Cooling Generating Systems		\$63,712.00
Domestic Water Dist		\$32,400.00
Plumbing Fixtures		\$35,100.00
16 Electrical	7.34%	\$69,679.00
Electrical Service & Distribution		\$69,679.00
19 FF&E	6.32%	\$60,000.00
Interior FF&E allowance		\$60,000.00
Total Raw Cost	100.00%	\$949,219.31

Additional Hard Cost (Template: Army Lodging New Construction)

Parameter Name	Percent	Amount
Spirit	0.50%	\$5,220.71
Force Protection	0.00%	\$0.00
General Cond	10.00%	\$94,921.93
Total Additional Hard Cost		\$100,142.64

Soft Cost (Template: Army Lodging New Construction)

Parameter Name	Percent	Amount
Contingency	5.00%	\$52,468.10
SIOH Conus	6.50%	\$71,618.95
Design	10.00%	\$104,936.20
08 MYr Inflation Fct	9.93%	\$126,943.65
Total Soft Cost		\$355,966.90
Total Project Cost for Replacement		\$1,405,328.85

INSERT BUILDING 20B FLOOR PLANS HERE



Building 80

Building 080

Building 80 was constructed in 1948. The 16,800 square foot facility contains 47 lodging units functioning as 44 standard stay rooms.

Significant Assumptions

The replacement cost model is based on 36 extended stay rooms.

The renovation plan was not required because existing spaces meet current size requirements and the current building is in good condition to meet lodging requirements.

The replacement cost model includes any public or back-of-the-house spaces as outlined in the Areas and Occupancies Schedule Template included in the Appendix.

All costs are adjusted by the Area Cost Factor of 100% for Fort Belvoir.

Cost Analysis

Condition Assessment Cost	\$1,930,105.00
Replacement Cost	\$2,743,575.00
Condition Assessment to Replacement Cost Ratio	70.35%

Because the Condition Assessment to Replacement Cost Ratio is greater than 50%, renovation of Building 80 is not recommended.

Attributes

01.Number of Units Constructed	47
02.Number of Units Used	44
03.Back of House Function	No
04.Single Room w/o FullKitchen	47
05.Single Room w/ Full Kitchen	0
06.Multi Room wo/ Full Kitchen	0
07.Multi Room w/ Full Kitchen	0
08.DVQ wo/ Full Kitchen	0
09.DVQ w/ Full Kitchen	0
10.Operating as Standard Room	44
11.Operating as Extended Stay	0
12.Operating as Family Suite	0
13.Renovated to Standard	36
14.Renovated to Extended Stay	0
15.Renovated to Family Suite	0
16.Delta renovation	-11

Condition Analysis/Recommendation

FF&E

FF&E Allowance

- Analysis: The FF&E is in fair condition.
- Recommendation: Replace the FF&E.

Foundations

Standard Foundations

- Analysis: The foundation is composed of perimeter beams and poured piers on compacted soil. No failures were observed. The foundation is in good condition.
- Recommendation: No corrective action is required.

Slab on Grade

- Analysis: The concrete slab on grade appears to be in good condition.
- Recommendation: No corrective action required.

Superstructure

Floor Construction

- Analysis: The elevated floor slab is that of wood floor joist. It is in fair condition.
- Recommendation: No corrective action required.

Roof Construction

- Analysis: The roof substrate was not observed but is believed to be in fair condition. The fascia and gutter system are in fair condition.
- Recommendation: Replace the fascia, gutters and downspouts.

Exterior Enclosure

Exterior Walls

- Analysis: The exterior walls are brick with wood trim. The brick is in good condition however the wood trim is in poor condition.
- Recommendation: Point the brick as need and scrape and paint the wood trim.

Exterior Windows

- Analysis: The exterior windows and single pane double hung windows with triple track storm windows are in fair condition.
- Recommendation: Replaced the windows with thermo-pane units.

Exterior Doors

- Analysis: The exterior hollow metal doors are in fair condition.
- Recommendation: Replace the exterior doors with new hollow metal doors. Replace the hardware.

Roofing

Roof Coverings

- Analysis: The asphalt shingles were replaced in 1998. They are in good condition.
- Recommendation: No corrective action required.

Interior Construction

Partitions

- Analysis: The existing drywall partitions are in fair condition.
- Recommendation: No corrective action required.

Interior Doors

- Analysis: The interior doors are solid core wood doors and are in fair condition.
- Recommendation: Replace the wood doors and associated hardware while using the existing frame.

Interior Finishes

Wall Finishes

- Analysis: The interior partition wall finish is in fair condition.
- Recommendation: Repaint the walls.

Floor Finishes

- Analysis: The units have carpet and the bathrooms have ceramic tile. The ceramic tile is in fair condition and it appears to be original and the carpet is in fair condition.
- Recommendation: Replace the floor finishes.

Ceiling Finishes

- Analysis: The interior corridors have acoustical tile which is in fair condition. The guest room ceilings are painted drywall which is also in fair condition.
- Recommendation: Replace the ceiling tile and paint the guest room ceilings.

Plumbing

Plumbing Fixtures

- Analysis: The bathroom appears to be original including the lavatory, shower and water closet.
- Recommendation: Replace the shared bathrooms. The bathroom fixtures should be replaced.

Domestic Water Distribution

- Analysis: The domestic water system appears to be original. It is in fair condition.
- Recommendation: Replace the entire domestic water system.

HVAC

Cooling Generating Systems

- Analysis: The building has a two pipe fan coil heating/cooling system that is in fair condition. The boiler is original.

but has had a new burner installed within the last three years. The chiller was replaced in 2000.

- Recommendation: Install PTAC units.

Fire Protection

Sprinklers

- Analysis: The sprinkler system is in fair condition.
- Recommendation: Replace the sprinkler system.

Electrical

Electrical Service/Distribution

- Analysis: The electrical service is supplied underground to the building from a ground mounted transformer that is located behind the building. The secondary service is 120/208 Y volt 3 phase with a 800(?) amp main disconnect. The distribution panels are located in the boiler room and provide power for lighting and receptacles.

- Recommendation: Up grade the electrical service with PTAC units and replace the entire system.

Communications and Security

- Analysis: The fire detection system is in poor condition.
- Recommendation: The fire alarm system should be replaced.

Equipment

Other Equipment

- Analysis: The washer and dryers for guests are in fair condition.
- Recommendation: Replace the washer and dryers.

Site Preparation

Site Earthwork

- Analysis: The site is in fair condition.
- Recommendation: No corrective action required

Major Functional Criteria

Major Functional Criteria Analysis

The following are existing conditions that do not meet the Functional Criteria and are considered major deficits. Listed are the recommendations or solutions for remedying each deficit.

- **Back-of-House Spaces**

Most of the back-of-the-house spaces are required at the main lodging building on post. Presently these are located in building 470, and are not included in this building.

- **Extended Stay Guest Room**

Room Size and Configuration: The rooms do not meet size and configuration requirements, as the rooms have shared baths.

Recommendation: A Renovation Cost estimate is used to indicate a total redo of rooms to meet the standard. This renovation cost will make the building more than 50% of the new construction cost.

- **Public Spaces**

Most of the back-of-the-house spaces are required at the main lodging building on post. Presently these are located in building 470, and are not included in this building.

Condition Assessment/Renovation/Replacement Analysis

Condition Assessments

The Condition Assessment Cost lists what is required to make the building well as it is currently functioning. The cost includes all deficient items based on our field observation and using the Army Lodging standard Cap Ex replacement schedule.

Summary of Project Cost

CSI	Percent	Amount
06 Wood & Plastics	0.08%	\$865.50
Fascia: Damaged		\$865.50
07 Thermal & Moisture Protection	1.48%	\$16,909.00
Fascia: Damaged or Failing		\$4,216.00
Gutters: Damaged or Failing		\$12,693.00
08 Doors & Windows	16.20%	\$185,673.99
Al. Windows - Beyond Useful Life		\$74,433.19
Exterior Steel Door - Beyond expected useful life		\$15,873.20
Wood Door - Beyond Useful Life		\$95,367.60
09 Finishes	25.86%	\$296,325.38
Acoustical Ceiling & Grid: Beyond expt useful life		\$8,956.40
Carpet: Beyond Useful Life		\$55,396.68
Exterior Surfaces: Paint Failing		\$1,380.00
Floor Tile: Damaged or Failing		\$11,686.50
Interior ceilings: Paint Failing		\$10,443.00
Vinyl Wall Covering: Beyond expected useful life		\$136,785.60
Wall Tile: Damaged or Failing		\$71,677.20
10 Specialties	0.47%	\$5,400.00
Awnings: Damaged or Failing		\$5,400.00
11 Equipment	0.11%	\$1,250.00
Washing Machine: Beyond expected useful life.		\$1,250.00
13 Special Construction	6.32%	\$72,441.60
Fire Alarm System: Missing or Inadequate		\$14,280.00
Fire Sprinklers: Missing or Inadequate		\$58,161.60
15 Mechanical	20.06%	\$229,879.20
Domestic water system: Beyond expected useful life		\$38,781.20
Hydronic heating system: Beyond expt useful life		\$16,660.00
Lavatory: Beyond expected useful life		\$13,268.40
PTAC: Missing or inadequate		\$84,729.60
Shower: Beyond expected useful life		\$51,444.00
Water closet: Beyond expected useful life		\$24,996.00
16 Electrical	8.48%	\$97,197.65
Branch Circuits: Beyond Expected Useful Life		\$57,730.00
Building service: Beyond expected useful life		\$7,341.65
Main service: Beyond expected useful life		\$32,126.00
19 FF&E	20.94%	\$240,000.00
Hard and soft goods: Beyond expected useful life		\$240,000.00
Total Raw Cost	100.00%	\$1,145,942.00

Additional Hard Cost (Template: Army Lodging Renovation)

Parameter Name	Percent	Amount
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Spirit	0.50%	\$6,302.68
Force Protection	9.00%	\$114,015.50
General Conditions	10.00%	\$114,594.20
Total Additional Hard Cost		\$234,912.38

Soft Cost (Template: Army Lodging Renovation)

Parameter Name	Percent	Amount
Contingency	10.00%	\$138,085.44
SIOH Conus	6.50%	\$98,731.09
Design	10.00%	\$138,085.44
08 MYr Inflation Fct	9.93%	\$174,346.61
Total Soft Cost		\$549,248.57

Total Project		\$1,930,102.95
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Replacement

The Replacement Cost is the cost to rebuild the units as part of a new facility including the appropriate back-of-house and public spaces. This cost is based on number and types of units in the renovation model.

Summary of Project Replacement Cost

CSI	Percent	Amount
02 Site Work	2.79%	\$51,672.13
Site Earthwork		\$51,672.13
03 Concrete	15.37%	\$284,822.33
Floor Construction		\$170,167.33
Slab on Grade		\$38,220.00
Standard Foundations		\$76,435.00
04 Masonry	5.78%	\$107,155.62
Exterior Walls		\$107,155.62
07 Thermal & Moisture Protection	7.35%	\$136,215.04
Roof Construction		\$41,897.03
Roof Coverings		\$94,318.01
08 Doors & Windows	10.78%	\$199,699.00
Exterior Doors		\$6,165.00
Exterior Windows		\$160,000.00
Interior Doors		\$33,534.00
09 Finishes	14.91%	\$276,218.20
Ceiling Finishes		\$44,912.94
Floor Finishes		\$106,475.40
Partitions		\$69,050.02
Wall Finishes		\$55,779.84
11 Equipment	3.89%	\$72,000.00
Other Equipment		\$72,000.00
13 Special Construction	4.97%	\$92,027.74
Communications & Security		\$41,427.77
Sprinklers		\$50,599.97
15 Mechanical	17.65%	\$327,052.16
Cooling Generating Systems		\$178,552.16
Domestic Water Dist		\$43,200.00
Plumbing Fixtures		\$105,300.00
16 Electrical	6.81%	\$126,266.00
Electrical Service & Distribution		\$126,266.00
19 FF&E	9.71%	\$180,000.00
Interior FF&E allowance		\$180,000.00
Total Raw Cost	100.00%	\$1,853,128.21

Additional Hard Cost (Template: Army Lodging New Construction)

Parameter Name	Percent	Amount
Spirit	0.50%	\$10,192.21
Force Protection	0.00%	\$0.00
General Cond	10.00%	\$185,312.82
Total Additional Hard Cost		\$195,505.03

Soft Cost (Template: Army Lodging New Construction)

Parameter Name	Percent	Amount
Contingency	5.00%	\$102,431.66
SIOH Conus	6.50%	\$139,819.22
Design	10.00%	\$204,863.32
08 MYr Inflation Fct	9.93%	\$247,827.72
Total Soft Cost		\$694,941.92
Total Project Cost for Replacement		\$2,743,575.16

INSERT BUILDING 80 FLOOR PLANS HERE



Building 81

Building 081

Building 81 was constructed in 1948. The 16,800 square foot facility contains 47 lodging units functioning as 45 standard stay rooms.

Significant Assumptions

The replacement cost model is based on 36 extended stay rooms.

The renovation plan was not required because existing spaces meet current size requirements and the current building is in good condition to meet lodging requirements.

The replacement cost model includes any public or back-of-the-house spaces as outlined in the Areas and Occupancies Schedule Template included in the Appendix.

All costs are adjusted by the Area Cost Factor of 100% for Fort Belvoir.

Cost Analysis

Condition Assessment Cost	\$1,838,445.00
Replacement Cost	\$2,743,575.00
Condition Assessment to Replacement Cost Ratio	67.01%

Because the Condition Assessment to Replacement Cost Ratio is greater than 50%, renovation of Building 81 is not recommended.

Attributes

01.Number of Units Constructed	47
02.Number of Units Used	45
03.Back of House Function	No
04.Single Room w/o FullKitchen	47
05.Single Room w/ Full Kitchen	0
06.Multi Room wo/ Full Kitchen	0
07.Multi Room w/ Full Kitchen	0
08.DVQ wo/ Full Kitchen	0
09.DVQ w/ Full Kitchen	0
10.Operating as Standard Room	45
11.Operating as Extended Stay	0
12.Operating as Family Suite	0
13.Renovated to Standard	0
14.Renovated to Extended Stay	36
15.Renovated to Family Suite	0
16.Delta renovation	-11

Condition Analysis/Recommendation

FF&E

FF&E Allowance

- Analysis: The FF&E is in fair condition.
- Recommendation: Replace the FF&E.

Foundations

Standard Foundations

- Analysis: The foundation is composed of perimeter beams and poured piers on compacted soil. No failures were observed. The foundation is in good condition.
- Recommendation: No corrective action is required.

Slab on Grade

- Analysis: The concrete slab on grade appears to be in good condition.
- Recommendation: No corrective action required.

Superstructure

Floor Construction

- Analysis: The elevated floor slab is that of wood floor joist and is in fair condition.
- Recommendation: No corrective action required.

Roof Construction

- Analysis: The roof substrate was not observed but is believed to be in fair condition. The fascia is in poor condition. The gutters and downspouts are in poor condition.
- Recommendation: Replace the fascia, gutters and downspouts.

Exterior Enclosure

Exterior Walls

- Analysis: The exterior walls are brick with wood trim. The brick is in good condition. The trim is in fair condition.
- Recommendation: Point the up brick as needed. Scrape and paint the wood trim.

Exterior Windows

- Analysis: The exterior windows are single pane double hung windows with triple track storm windows. These are in poor condition.
- Recommendation: Replaced the windows with thermo-pane units.

Exterior Doors

- Analysis: The exterior hollow metal doors are in fair condition.
- Recommendation: Replace the exterior doors with new hollow metal doors. Replace the hardware.

Roofing

Roof Coverings

- Analysis: The asphalt shingles were replaced in 1998. They are in good condition.
- Recommendation: No corrective action required.

Interior Construction

Partitions

- Analysis: The existing drywall partitions are in fair condition.
- Recommendation: No corrective action required.

Interior Doors

- Analysis: The interior doors are solid core wood doors that are in fair condition.
- Recommendation: Replace the wood doors and associated hardware.

Interior Finishes

Wall Finishes

- Analysis: The interior partition wall finish is in fair condition.
- Recommendation: Repaint the walls.

Floor Finishes

- Analysis: The units have carpet and the bathrooms have ceramic tile. The ceramic tile is in fair condition. The carpet is in fair condition.
- Recommendation: Replace the floor finishes.

Ceiling Finishes

- Analysis: The interior corridors have acoustical tile which is in fair condition. The guest room ceilings are painted drywall which is in poor condition.
- Recommendation: Replace the ceiling tiles and paint the guest room ceilings.

Plumbing

Plumbing Fixtures

- Analysis: The bathroom appears to be original including the lavatory, shower, and water closet.
- Recommendation: The recommendation is to delete the shared bathrooms. Replace the bathroom fixtures.

Domestic Water Distribution

- Analysis: The domestic water system appears to be original. It is in fair condition.
- Recommendation: Replace the entire domestic water system.

HVAC

Cooling Generating Systems

- Analysis: The building has a two pipe fan coil heating/cooling system that is in fair condition. The boiler is original.

but has had a new burner installed within the last three years. The chiller was replaced in 2000.

- Recommendation: Install PTAC units in all of the rooms.

Fire Protection

Sprinklers

- Analysis: The sprinkler system appears to be in fair condition.
- Recommendation: Replace the sprinkler system.

Electrical

Electrical Service/Distribution

- Analysis: The electrical service is supplied underground to the building from a ground mounted transformer that is located behind the building. The secondary service is 120/208 Y volt 3 phase with a 800(?) amp main disconnect. The distribution panels are located in the boiler room and provide power for lighting and receptacles.
- Recommendation: Replace the entire distribution system .

Communications and Security

- Analysis: The fire detection system is in fair condition.
- Recommendation: The fire alarm system should be replaced.

Equipment

Other Equipment

- Analysis: The washer and dryers for the guests are in fair condition.
- Recommendation: Replace the washer and dryers.

Site Preparation

Site Earthwork

- Analysis: The site is in good condition.
- Recommendation: No corrective action required

Major Functional Criteria

Major Functional Criteria Analysis

The following are existing conditions that do not meet the Functional Criteria and are considered major deficits. Listed are the recommendations or solutions for remedying each deficit.

- **Back-of-House Spaces**

Most of the back-of-the-house spaces are required at the main lodging building on post. Presently these are located in building 470, and are not included in this building.

- **Extended Stay Guest Room**

Room Size and Configuration: The rooms do not meet size and configuration requirements, as the rooms have shared baths.

Recommendation: A Renovation Cost estimate is used to indicate a total redo of rooms to meet the standard. This renovation cost will make the building more than 50% of the new construction cost.

- **Public Spaces**

Most of the back-of-the-house spaces are required at the main lodging building on post. Presently these are located in building 470, and are not included in this building.

Condition Assessment/Renovation/Replacement Analysis

Condition Assessments

The Condition Assessment Cost lists what is required to make the building well as it is currently functioning. The cost includes all deficient items based on our field observation and using the Army Lodging standard Cap Ex replacement schedule.

Summary of Project Cost

CSI	Percent	Amount
06 Wood & Plastics	0.08%	\$865.50
Fascia: Damaged		\$865.50
07 Thermal & Moisture Protection	1.07%	\$11,662.00
Fascia: Damaged or Failing		\$4,216.00
Gutters: Damaged or Failing		\$7,446.00
08 Doors & Windows	17.01%	\$185,673.99
Al. Windows - Beyond Useful Life		\$74,433.19
Exterior Steel Door - Beyond expected useful life		\$15,873.20
Wood Door - Beyond Useful Life		\$95,367.60
09 Finishes	22.75%	\$248,368.08
Acoustical Ceiling & Grid: Beyond expt useful life		\$8,956.40
Carpet: Beyond Useful Life		\$55,396.68
Exterior Surfaces: Paint Failing		\$103.50
Floor Tile: Damaged or Failing		\$11,686.50
Interior ceilings: Paint Failing		\$10,443.00
Vinyl Wall Covering: Beyond expected useful life		\$90,104.80
Wall Tile: Damaged or Failing		\$71,677.20
10 Specialties	0.49%	\$5,400.00
Awnings: Damaged or Failing		\$5,400.00
11 Equipment	0.11%	\$1,250.00
Washing Machine: Beyond expected useful life.		\$1,250.00
13 Special Construction	6.64%	\$72,441.60
Fire Alarm System: Missing or Inadequate		\$14,280.00
Fire Sprinklers: Missing or Inadequate		\$58,161.60
15 Mechanical	20.95%	\$228,664.80
Domestic water system: Beyond expected useful life		\$38,781.20
Hydronic heating system: Beyond expt useful life		\$16,660.00
Lavatory: Beyond expected useful life		\$13,268.40
PTAC: Missing or inadequate		\$84,729.60
Shower: Beyond expected useful life		\$51,444.00
Water closet: Beyond expected useful life		\$23,781.60
16 Electrical	8.90%	\$97,197.65
Branch Circuits: Beyond Expected Useful Life		\$57,730.00
Building service: Beyond expected useful life		\$7,341.65
Main service: Beyond expected useful life		\$32,126.00
19 FF&E	21.99%	\$240,000.00
Hard and soft goods: Beyond expected useful life		\$240,000.00
Total Raw Cost	100.00%	\$1,091,524.00

Additional Hard Cost (Template: Army Lodging Renovation)

Parameter Name	Percent	Amount
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Spirit	0.50%	\$6,003.38
Force Protection	9.00%	\$108,601.18
General Conditions	10.00%	\$109,152.40
Total Additional Hard Cost		\$223,756.96

Soft Cost (Template: Army Lodging Renovation)

Parameter Name	Percent	Amount
Contingency	10.00%	\$131,528.10
SIOH Conus	6.50%	\$94,042.59
Design	10.00%	\$131,528.10
08 MYr Inflation Fct	9.93%	\$166,067.31
Total Soft Cost		\$523,166.09

Total Project		\$1,838,447.05
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Replacement

The Replacement Cost is the cost to rebuild the units as part of a new facility including the appropriate back-of-house and public spaces. This cost is based on number and types of units in the renovation model.

Summary of Project Replacement Cost

CSI	Percent	Amount
02 Site Work	2.79%	\$51,672.13
Site Earthwork		\$51,672.13
03 Concrete	15.37%	\$284,822.33
Floor Construction		\$170,167.33
Slab on Grade		\$38,220.00
Standard Foundations		\$76,435.00
04 Masonry	5.78%	\$107,155.62
Exterior Walls		\$107,155.62
07 Thermal & Moisture Protection	7.35%	\$136,215.04
Roof Construction		\$41,897.03
Roof Coverings		\$94,318.01
08 Doors & Windows	10.78%	\$199,699.00
Exterior Doors		\$6,165.00
Exterior Windows		\$160,000.00
Interior Doors		\$33,534.00
09 Finishes	14.91%	\$276,218.20
Ceiling Finishes		\$44,912.94
Floor Finishes		\$106,475.40
Partitions		\$69,050.02
Wall Finishes		\$55,779.84
11 Equipment	3.89%	\$72,000.00
Other Equipment		\$72,000.00
13 Special Construction	4.97%	\$92,027.74
Communications & Security		\$41,427.77
Sprinklers		\$50,599.97
15 Mechanical	17.65%	\$327,052.16
Cooling Generating Systems		\$178,552.16
Domestic Water Dist		\$43,200.00
Plumbing Fixtures		\$105,300.00
16 Electrical	6.81%	\$126,266.00
Electrical Service & Distribution		\$126,266.00
19 FF&E	9.71%	\$180,000.00
Interior FF&E allowance		\$180,000.00
Total Raw Cost	100.00%	\$1,853,128.21

Additional Hard Cost (Template: Army Lodging New Construction)

Parameter Name	Percent	Amount
Spirit	0.50%	\$10,192.21
Force Protection	0.00%	\$0.00
General Cond	10.00%	\$185,312.82
Total Additional Hard Cost		\$195,505.03

Soft Cost (Template: Army Lodging New Construction)

Parameter Name	Percent	Amount
Contingency	5.00%	\$102,431.66
SIOH Conus	6.50%	\$139,819.22
Design	10.00%	\$204,863.32
08 MYr Inflation Fct	9.93%	\$247,827.72
Total Soft Cost		\$694,941.92
Total Project Cost for Replacement		\$2,743,575.16

INSERT BUILDING 81 FLOOR PLANS HERE



Building 172

Building 172

Building 172 was constructed in the early 1950's and was renovated in 2002. The 3000 square foot facility contains a DVQ with a full kitchen. The building is functioning as a family suite for high ranking visitors.

Significant Assumptions

The replacement and renovation cost models are based on 4 family suites.

The renovation uses the existing foot print, with the plan reworked to meet current lodging size requirements.

The renovation cost includes all condition assessment costs.

The renovation and replacement cost models include any public or back-of-the-house spaces as outlined in the Areas and Occupancies Schedule Template included in the Appendix.

All costs are adjusted by the Area Cost Factor of 100% for Ft Belvoir.

Cost Analysis

Renovation Cost	\$316,655.00
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Replacement Cost	\$515,155.00
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Renovation to Replacement Cost Ratio	61.47%
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Because the Renovation to Replacement Cost Ratio is greater than 50%, renovation of Building 172 is not recommended.

Attributes

01.Number of Units Constructed	1
02.Number of Units Used	1
03.Back of House Function	No
04.Single Room w/o FullKitchen	0
05.Single Room w/ Full Kitchen	0
06.Multi Room wo/ Full Kitchen	0
07.Multi Room w/ Full Kitchen	0
08.DVQ wo/ Full Kitchen	0
09.DVQ w/ Full Kitchen	1
10.Operating as Standard Room	0
11.Operating as Extended Stay	0
12.Operating as Family Suite	1
13.Renovated to Standard	0
14.Renovated to Extended Stay	0
15.Renovated to Family Suite	4
16.Delta renovation	3

Condition Analysis/Recommendation

FF&E

FF&E Allowance

- Analysis: The building was completely renovation in 2001. FF&E is in good condition.
- Recommendation: No corrective action required.

Foundations

Standard Foundations

- Analysis: The foundation is reinforced concrete with no visible defects.
- Recommendation: No corrective action required.

Slab on Grade

- Analysis: The slab on grade is concrete with no visible defes.
- Recommendation: No corrective action required.

Superstructure

Floor Construction

- Analysis: The pre-cast concrete floors are in good condition.
- Recommendation: No corrective action required.

Roof Construction

- Analysis: The building received a complete renovation in 2001. The roof is in good condition.
- Recommendation: No corrective action required.

Exterior Enclosure

Exterior Walls

- Analysis: The exterior is pre-cast concrete that is in good condition.
- Recommendation: No corrective action required.

Exterior Windows

- Analysis: The exterior windows were replace during the 2001 renovation and are in good condition.
- Recommendation: No corrective action required.

Exterior Doors

- Analysis: The exterior doors were replaced during the 2001 renovation. They are in good condition.
- Recommendation: No corrective action required.

Roofing

Roof Coverings

- Analysis: The roof coverings were replaced during the 2001 renovation. They are in good condition.
- Recommendation: No corrective action required.

Interior Construction

Partitions

- Analysis: The interior partitions are painted concrete. They are in good condition.
- Recommendation: No corrective action required.

Interior Doors

- Analysis: The interior doors were replaced during the 2001 renovation. They are in good condition.
- Recommendation: No corrective action required.

Interior Finishes

Wall Finishes

- Analysis: The wall finishes are painted concrete. They are in good condition.
- Recommendation: No corrective action required.

Floor Finishes

- Analysis: The floor finishes are hardwood floors and vinyl. They are in good condition.
- Recommendation: No corrective action required.

Ceiling Finishes

- Analysis: The ceiling is painted concrete in good condition.
- Recommendation: No corrective action required.

Plumbing

Plumbing Fixtures

- Analysis: The building was completely renovated in 2001. The fixtures are in good condition.
- Recommendation: No corrective action required.

Domestic Water Distribution

- Analysis: The domestic water system is in good condition.
- Recommendation: No corrective action required.

HVAC

Cooling Generating Systems

- Analysis: The building was renovated in 2001. The A/C system is in good condition.
- Recommendation: No corrective action required.

Fire Protection

Sprinklers

- Analysis: The building has no sprinkler system.
- Recommendation: No corrective action required.

Electrical

Electrical Service/Distribution

- Analysis: The building was completely renovated in 2001. The electrical system is in good condition.
- Recommendation: No corrective action required.

Communications and Security

- Analysis: The building has no fire alarm system. The smoke alarms are in good condition.
- Recommendation: No corrective action required.

Equipment

Other Equipment

- Analysis: The building has a complete galley kitchen which is in good condition.
- Recommendation: No corrective action required.

Site Preparation

Site Earthwork

- Analysis: The area surrounding the house is in good condition.
- Recommendation: No corrective action required.

Major Functional Criteria

Major Functional Criteria Analysis

The following are existing conditions that do not meet the Functional Criteria and are considered major deficits. Listed are the recommendations or solutions for remedying each deficit.

- **Back-of-House Spaces**

Most of the back-of-the-house spaces are required at the main lodging building on post. Presently these are located in building 470, and are not included in this building.

- **Family Guest Suite**

Room Size and Configuration: The one room does not meet size and configuration requirements.

Recommendation: A Renovation Cost estimate is used to indicate a total redo of the building into 4 guest rooms. This renovation cost will make the building more than 50% of the new construction cost.

- **Public Spaces**

Most of the back-of-the-house spaces are required at the main lodging building on post. Presently these are located in building 470, and are not included in this building.

Condition Assessment/Renovation/Replacement Analysis

Condition Assessments

The Condition Assessment Cost lists what is required to make the building well as it is currently functioning. The cost includes all deficient items based on our field observation and using the Army Lodging standard Cap Ex replacement schedule.

Summary of Project Cost

CSI	Percent	Amount
Total Raw Cost	100.00%	\$0.00

Additional Hard Cost (Template: Army Lodging Renovation)

Parameter Name	Percent	Amount
Spirit	0.50%	\$0.00
Force Protection	9.00%	\$0.00
General Conditions	10.00%	\$0.00
Total Additional Hard Cost		\$0.00

Soft Cost (Template: Army Lodging Renovation)

Parameter Name	Percent	Amount
Contingency	10.00%	\$0.00
SIOH Conus	6.50%	\$0.00
Design	10.00%	\$0.00
08 MYr Inflation Fct	9.93%	\$0.00
Total Soft Cost		\$0.00
Total Project		\$0.00

Renovation

The Renovation Cost is based on making changes to the building to meet the Army Lodging Standard Functional Criteria. Unless otherwise stated, this cost also includes all building deficiencies listed under the Condition Assessment Cost.

Summary of Project Renovation Cost

CSI	Percent	Amount
07 Thermal & Moisture Protection	1.97%	\$3,698.69
Roof Construction		\$3,698.69
08 Doors & Windows	4.40%	\$8,280.00
Interior Doors		\$8,280.00
09 Finishes	32.07%	\$60,285.38
Ceiling Finishes		\$10,999.80
Floor Finishes		\$14,013.32
Partitions		\$13,465.54
Wall Finishes		\$21,806.72
11 Equipment	4.26%	\$8,000.00
Other Equipment		\$8,000.00
13 Special Construction	8.88%	\$16,687.44
Communications & Security		\$7,512.12
Sprinklers		\$9,175.32
15 Mechanical	26.00%	\$48,876.96
Cooling Generating Systems		\$32,376.96
Domestic Water Dist		\$4,800.00
Plumbing Fixtures		\$11,700.00
16 Electrical	11.80%	\$22,176.00
Electrical Service & Distribution		\$22,176.00
19 FF&E	10.64%	\$20,000.00
Interior FF&E allowance		\$20,000.00
Total Raw Cost	100.00%	\$188,004.46

Additional Hard Cost (Template: Army Lodging Renovation)

Parameter Name	Percent	Amount
Spirit	0.50%	\$1,034.02
Force Protection	9.00%	\$18,705.50
General Conditions	10.00%	\$18,800.45
Total Additional Hard Cost		\$38,539.98

Soft Cost (Template: Army Lodging Renovation)

Parameter Name	Percent	Amount
Contingency	10.00%	\$22,654.44
SIOH Conus	6.50%	\$16,197.93
Design	10.00%	\$22,654.44
08 MYr Inflation Fct	9.93%	\$28,603.49
Total Soft Cost		\$90,110.30

Total Project Cost for Renovation	\$316,654.74
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Replacement

The Replacement Cost is the cost to rebuild the units as part of a new facility including the appropriate back-of-house and public spaces. This cost is based on number and types of units in the renovation model.

Summary of Project Replacement Cost

CSI	Percent	Amount
02 Site Work	5.17%	\$17,999.75
Site Earthwork		\$17,999.75
03 Concrete	11.65%	\$40,550.00
Floor Construction		\$14,000.00
Slab on Grade		\$13,275.00
Standard Foundations		\$13,275.00
04 Masonry	10.54%	\$36,662.10
Exterior Walls		\$36,662.10
07 Thermal & Moisture Protection	11.76%	\$40,927.15
Roof Construction		\$7,681.19
Roof Coverings		\$33,245.96
08 Doors & Windows	13.35%	\$46,445.00
Exterior Doors		\$6,165.00
Exterior Windows		\$32,000.00
Interior Doors		\$8,280.00
09 Finishes	13.54%	\$47,098.73
Ceiling Finishes		\$7,726.05
Floor Finishes		\$13,511.62
Partitions		\$13,465.54
Wall Finishes		\$12,395.52
11 Equipment	4.02%	\$14,000.00
Other Equipment		\$14,000.00
13 Special Construction	4.59%	\$15,983.10
Communications & Security		\$7,195.05
Sprinklers		\$8,788.05
15 Mechanical	12.57%	\$43,740.00
Cooling Generating Systems		\$21,240.00
Domestic Water Dist		\$10,800.00
Plumbing Fixtures		\$11,700.00
16 Electrical	7.06%	\$24,552.50
Electrical Service & Distribution		\$24,552.50
19 FF&E	5.75%	\$20,000.00
Interior FF&E allowance		\$20,000.00
Total Raw Cost	100.00%	\$347,958.32

Additional Hard Cost (Template: Army Lodging New Construction)

Parameter Name	Percent	Amount
Spirit	0.50%	\$1,913.77
Force Protection	0.00%	\$0.00
General Cond	10.00%	\$34,795.83
Total Additional Hard Cost		\$36,709.60

Soft Cost (Template: Army Lodging New Construction)

Parameter Name	Percent	Amount
Contingency	5.00%	\$19,233.40
SIOH Conus	6.50%	\$26,253.59
Design	10.00%	\$38,466.79
08 MYr Inflation Fct	9.93%	\$46,534.13
Total Soft Cost		\$130,487.91
Total Project Cost for Replacement		\$515,155.84

INSERT BUILDING 172 FLOOR PLANS HERE



Building 470

Building 470

Building 470 was constructed in 1975. The 109,000 square foot facility contains 219 lodging units, operating as 213 extended stay rooms 6 single room DVQs for high ranking visitors.

Significant Assumptions

The replacement cost model is based on 222 extended stay rooms. The renovation uses the existing foot print, with the plan reworked to meet current lodging size requirements.

This building is in good condition for both the Condition Assessment and Function Criteria. In this building the Condition Assessment costs include the wellness items and the Renovation Cost includes functional renovations but not Condition Assessment cost due to the limited nature of the renovation. Therefore in the Cost Analysis the sum of the Condition Assessment and Renovation cost is used for the ratio to the Replacement Cost

The renovation and replacement cost models include any public or back-of-the-house spaces as outlined in the Areas and Occupancies Schedule Template included in the Appendix.

All costs are adjusted by the Area Cost Factor of 100% for Ft Belvoir.

Cost Analysis

Condition Assessment & Renovation Cost \$8,006,645.00

Replacement Cost \$22,171,705.00

Condition Assessment & Renovation Cost to Replacement Cost

Ratio 36.11%

Because the Sum of the Condition Assessment and Renovation Costs to Replacement Cost Ratio is less than 50%, renovation of Building 470 could be considered.

Attributes

01.Number of Units Constructed	219
02.Number of Units Used	219
03.Back of House Function	Yes
04.Single Room w/o FullKitchen	0
05.Single Room w/ Full Kitchen	213
06.Multi Room wo/ Full Kitchen	0
07.Multi Room w/ Full Kitchen	0
08.DVQ wo/ Full Kitchen	0
09.DVQ w/ Full Kitchen	6
10.Operating as Standard Room	0
11.Operating as Extended Stay	219
12.Operating as Family Suite	0
13.Renovated to Standard	0
14.Renovated to Extended Stay	222
15.Renovated to Family Suite	0
16.Delta renovation	3

Condition Analysis/Recommendation

FF&E

FF&E Allowance

- Analysis: The FF& E is in fair condition.
- Recommendation: Replace the FF&E.

Foundations

Standard Foundations

- Analysis: The building's foundation is reinforced concrete with no visible sign of failure.
- Recommendation: No corrective action required.

Slab on Grade

- Analysis: The slab on grade is concrete in good condition.
- Recommendation: No corrective action required.

Superstructure

Floor Construction

- Analysis: The floor construction is poured concrete in good condition.
- Recommendation: No corrective action required.

Roof Construction

- Analysis: The roof structure is poured concrete in good condition.
- Recommendation: No corrective action required.

Exterior Enclosure

Exterior Walls

- Analysis: The exterior walls are brick veneer in good condition.
- Recommendation: No corrective action required.

Exterior Windows

- Analysis: The window system is original single pane glazing. System is in fair condition.
- Recommendation: Replace the window system with insulated windows.

Exterior Doors

- Analysis: The exterior doors are a mixture of aluminum storefront at the main entrance and hollow metal at the side entrances. They are in good condition.
- Recommendation: No corrective action required.

Roofing

Roof Coverings

- Analysis: The building's roof appears to be in good condition.
- Recommendation: No corrective action required.

Interior Construction

Partitions

- Analysis: The room partitions appear solid and are in good condition.
- Recommendation: No corrective action required.

Interior Doors

- Analysis: The interior doors to the rooms are in fair condition.
- Recommendation: Replace the interior wood doors.

Fittings

- Analysis: There are no toilet partitions in the building and the lockers in the back-of-the-house areas appear to be in good condition.
- Recommendation: No corrective action required.

Stairs

Stair Construction

- Analysis: The stair construction is concrete which is in good condition.
- Recommendation: No corrective action required.

Interior Finishes

Wall Finishes

- Analysis: The vinyl wall covering is in fair condition.
- Recommendation: Replace the vinyl wall covering.

Floor Finishes

- Analysis: The floor finishes are in fair condition.
- Recommendation: Replace the carpet and VCT.

Ceiling Finishes

- Analysis: The painted ceilings are in fair condition.
- Recommendation: Repaint the ceilings.

Conveying

Elevators and Lifts

- Analysis: The elevator appears to be in good condition .
- Recommendation: No corrective action required.

Plumbing

Plumbing Fixtures

- Analysis: The bathroom fixtures appear to be in fair condition.
- Recommendation: Repalce the bathroom fixtures and the water closet.

Domestic Water Distribution

- Analysis: The domestic water system is in good condition.
- Recommendation: No corrective action required.

HVAC

Cooling Generating Systems

- Analysis: The fan coil units are in fair condition.

- Recommendation: Install PTAC units in all of the rooms.

Fire Protection

Sprinklers

- Analysis: The sprinkler system is in good condition.
- Recommendation: No corrective action required.

Electrical

Electrical Service/Distribution

- Analysis: The electrical service is in good condition.
- Recommendation: No corrective action required.

Communications and Security

- Analysis: The building fire alarm system is in good condition .
- Recommendation: No corrective action required.

Equipment

Commercial Equipment

- Analysis: The commercial equipment appeared to be in good condition.
- Recommendation: No corrective action required.

Other Equipment

- Analysis: The kitchen units and washing machines for the guests are in fair condition.
- Recommendation: Replace the kitchen units along with the washing machines.

Furnishings

Fixed Furnishings

- Analysis:
- Recommendation:

Site Preparation

Site Earthwork

- Analysis: The surrounding site is in good condition
- Recommendation: No corrective action required.

Site Improvements

Parking Lots

- Analysis: The parking lot is in good condition.
- Recommendation: No corrective action required.

Site Electrical Utilities

Site Lighting

- Analysis: The site lighting is adequate and in good condition.
- Recommendation: No corrective action required.

Major Functional Criteria

- **Major Functional Criteria Analysis**

The following are existing conditions that do not meet the Functional Criteria and are considered major deficits. Listed are the recommendations or solutions for remedying each deficit.

- **Back-of-House Spaces**

Breakfast Prep Area / Kitchen

Does not exist.

Renovation Recommendation: Space was added to the basement level of the existing building.

Manager's Office

Oversized. Standard is 180 s.f.; existing is 235 s.f. and occupies an existing guest room.

Renovation Recommendation: Office is incorporated into new Administrative Area built in West wing, where guest rooms were currently being used as offices

Administration Offices including Asst. Manager's Office

Oversized. Standard is 800-900 s.f. for the number of units, existing is spread over several spaces and is 1410 s.f.

Renovation Recommendation: Space was consolidated into two adjacent spaces on the first floor in the west wing.

Administrative Conference Room

Does not exist.

Renovation Recommendation: Space is added as part of the consolidation of the administrative area on the 1st floor west wing.

General Storage and Bulk Storage

Does not exist.

Renovation Recommendation: Space was added to the basement level.

Housekeeping Laundry and Office

The housekeeping office is not located adjacent to the In House laundry.

Renovation Recommendation: It is recommended to move the office adjacent to the In House laundry.

- **Public Spaces**

Public Corridors

Corridors are only 5' wide, standard is 6' wide.

Renovation Recommendation: Leave corridor width as is. It is felt this deficit is not critical to the intent of the standard and is not included in the Condition Assessment or Renovation cost.

Breakfast Bar / Seating Area

Does not exist.

Renovation Recommendation: Space is included in the renovation of the basement floor in the existing lobby area.

Guest Bulk Storage

Does not exist.

Renovation Recommendation: Space is included in the new building plans.

Vending Areas

Does not exist.

Renovation Recommendation: Space is included in the renovation plans on the 2nd - 5th floors and the new building plans.

Study Rooms

Does not exist.

Renovation Recommendation: Space is included in the renovation plans for 1st - 5th floors

Condition Assessment/Renovation/Replacement Analysis

Condition Assessments

The Condition Assessment Cost lists what is required to make the building well as it is currently functioning. The cost includes all deficient items based on our field observation and using the Army Lodging standard Cap Ex replacement schedule.

Summary of Project Cost

CSI	Percent	Amount
08 Doors & Windows	26.25%	\$1,195,777.70
Al. Windows - Beyond Useful Life		\$821,112.50
Wood Door - Beyond Useful Life		\$374,665.20
09 Finishes	8.13%	\$370,387.15
Carpet: Beyond Useful Life		\$166,443.96
Interior ceilings: Paint Failing		\$36,178.80
VCT: Beyond Useful Life		\$6,009.99
Vinyl Wall Covering: Beyond expected useful life		\$161,754.40
11 Equipment	17.00%	\$774,219.00
Unit Kitchen: Beyond Useful Life		\$766,719.00
Washing Machine: Beyond expected useful life.		\$7,500.00
15 Mechanical	24.58%	\$1,119,856.50
PTAC: Missing or inadequate		\$386,578.80
Sink & vanity: Replace due to remodel		\$169,221.30
Tub: Beyond expected useful life		\$347,049.30
Water closet: Replace due to remodel		\$217,007.10
19 FF&E	24.04%	\$1,095,000.00
Hard and soft goods: Beyond expected useful life		\$1,095,000.00
Total Raw Cost	100.00%	\$4,555,240.00

Additional Hard Cost (Template: Army Lodging Renovation)

Parameter Name	Percent	Amount
Spirit	0.50%	\$25,053.82
Force Protection	9.00%	\$453,223.60
General Conditions	10.00%	\$455,524.00
Total Additional Hard Cost		\$933,801.42

Soft Cost (Template: Army Lodging Renovation)

Parameter Name	Percent	Amount
Contingency	10.00%	\$548,904.14
SIOH Conus	6.50%	\$392,466.46
Design	10.00%	\$548,904.14
08 MYr Inflation Fct	9.93%	\$693,046.10
Total Soft Cost		\$2,183,320.84
Total Project		\$7,672,362.27

Renovation

The Renovation Cost is based on making changes to the building to meet the Army Lodging Standard Functional Criteria. Unless otherwise stated, this cost also includes all building deficiencies listed under the Condition Assessment Cost.

Summary of Project Renovation Cost

CSI	Percent	Amount
08 Doors & Windows	3.19%	\$6,328.00
Interior Doors		\$6,328.00
09 Finishes	43.42%	\$86,166.72
Ceiling Finishes		\$30,454.00
Floor Finishes		\$32,705.60
Partitions		\$15,928.02
Wall Finishes		\$7,079.10
11 Equipment	7.56%	\$15,000.00
Other Equipment		\$15,000.00
13 Special Construction	7.75%	\$15,390.00
Communications & Security		\$9,234.00
Sprinklers		\$6,156.00
15 Mechanical	19.98%	\$39,656.00
Cooling Generating Systems		\$24,624.00
Domestic Water Dist		\$1,200.00
Plumbing Fixtures		\$13,832.00
16 Electrical	18.10%	\$35,928.00
Lighting & Branch Wiring		\$35,928.00
Total Raw Cost	100.00%	\$198,468.72

Additional Hard Cost (Template: Army Lodging Renovation)

Parameter Name	Percent	Amount
Spirit	0.50%	\$1,091.58
Force Protection	9.00%	\$19,746.65
General Conditions	10.00%	\$19,846.87
Total Additional Hard Cost		\$40,685.10

Soft Cost (Template: Army Lodging Renovation)

Parameter Name	Percent	Amount
Contingency	10.00%	\$23,915.38
SIOH Conus	6.50%	\$17,099.50
Design	10.00%	\$23,915.38
08 MYr Inflation Fct	9.93%	\$30,195.55
Total Soft Cost		\$95,125.81
Total Project Cost for Renovation		\$334,279.62

Replacement

The Replacement Cost is the cost to rebuild the units as part of a new facility including the appropriate back-of-house and public spaces. This cost is based on number and types of units in the renovation model.

Summary of Project Replacement Cost

CSI	Percent	Amount
02 Site Work	2.08%	\$311,884.75
Parking Lots		\$186,200.00
Site Earthwork		\$125,684.75
03 Concrete	28.04%	\$4,198,662.50
Floor Construction		\$3,400,367.50
Slab on Grade		\$93,045.00
Stair Construction		\$147,000.00
Standard Foundations		\$558,250.00
04 Masonry	3.47%	\$519,960.14
Exterior Walls		\$519,960.14
07 Thermal & Moisture Protection	3.64%	\$544,681.28
Roof Construction		\$316,090.91
Roof Coverings		\$228,590.37
08 Doors & Windows	8.13%	\$1,216,781.00
Exterior Doors		\$37,961.00
Exterior Windows		\$928,000.00
Interior Doors		\$250,820.00
09 Finishes	17.07%	\$2,556,752.54
Ceiling Finishes		\$690,698.72
Floor Finishes		\$915,144.51
Partitions		\$541,054.79
Wall Finishes		\$409,854.52
10 Specialties	0.03%	\$4,897.50
Fittings		\$4,897.50
11 Equipment	3.08%	\$461,034.50
Commercial Equipment		\$15,125.00
Other Equipment		\$445,909.50
12 Furnishings	0.03%	\$4,125.00
Fixed Furnishings		\$4,125.00
13 Special Construction	4.49%	\$672,133.00
Communications & Security		\$302,571.50
Sprinklers		\$369,561.50
14 Conveying Systems	1.43%	\$214,800.00
Elevators and Lifts		\$214,800.00
15 Mechanical	15.00%	\$2,246,328.00
Cooling Generating Systems		\$1,304,072.00
Domestic Water Dist		\$267,600.00
Plumbing Fixtures		\$674,656.00
16 Electrical	6.10%	\$913,680.00
Electrical Service & Distribution		\$907,095.00
Site Lighting		\$6,585.00
19 FF&E	7.41%	\$1,110,000.00
Interior FF&E allowance		\$1,110,000.00
Total Raw Cost	100.00%	\$14,975,720.22

Additional Hard Cost (Template: Army Lodging New Construction)

Parameter Name	Percent	Amount
Spirit	0.50%	\$82,366.46
Force Protection	0.00%	\$0.00
General Cond	10.00%	\$1,497,572.02
Total Additional Hard Cost		\$1,579,938.48

Soft Cost (Template: Army Lodging New Construction)

Parameter Name	Percent	Amount
Contingency	5.00%	\$827,782.94
SIOH Conus	6.50%	\$1,129,923.71
Design	10.00%	\$1,655,565.87
08 MYr Inflation Fct	9.93%	\$2,002,774.87
Total Soft Cost		\$5,616,047.38
Total Project Cost for Replacement		\$22,171,706.08

**INSERT BUILDING 470 FLOOR PLANS HERE
(6 EXISTING PLANS AND 6 RENOVATION PLANS)**



Building 505

Building 505

Building 505 was constructed in 1956. The 22,065 square foot facility contains 45 lodging units. The building is functioning as 32 standard stay rooms and 13 family suites.

Significant Assumptions

The replacement and renovation cost models are based on 34 family suites.

The renovation uses the existing foot print, with the plan reworked to meet current lodging size requirements.

The renovation cost includes all condition assessment costs.

The renovation and replacement cost models include any public or back-of-the-house spaces as outlined in the Areas and Occupancies Schedule Template included in the Appendix.

All costs are adjusted by the Area Cost Factor of 100% for Ft Belvoir.

Cost Analysis

Renovation Cost	\$2,895,065.00
Replacement Cost	\$3,807,190.00
Renovation to Replacement Cost Ratio	76.04%

Because the Renovation to Replacement Cost Ratio is greater than 50%, renovation of Building 505 is not recommended.

Attributes

01.Number of Units Constructed	45
02.Number of Units Used	45
03.Back of House Function	No
04.Single Room w/o FullKitchen	32
05.Single Room w/ Full Kitchen	0
06.Multi Room wo/ Full Kitchen	13
07.Multi Room w/ Full Kitchen	0
08.DVQ wo/ Full Kitchen	0
09.DVQ w/ Full Kitchen	0
10.Operating as Standard Room	32
11.Operating as Extended Stay	0
12.Operating as Family Suite	13
13.Renovated to Standard	0
14.Renovated to Extended Stay	0
15.Renovated to Family Suite	34
16.Delta renovation	-11

Condition Analysis/Recommendation

FF&E

FF&E Allowance

- Analysis: The FF&E items are in fair condition.
- Recommendation: Replace the FF&E.

Foundations

Standard Foundations

- Analysis: The foundation is reinforced concrete with no visible signs of failure.
- Recommendation: No corrective action required.

Slab on Grade

- Analysis: The slab on grade is concrete and is in good condition.
- Recommendation: No corrective action required.

Superstructure

Floor Construction

- Analysis: The floor construction is poured concrete and is in good condition,
- Recommendation: No corrective action required.

Roof Construction

- Analysis: The roof is poured concrete slab in good condition. The gutters and downspouts are in fair condition.
- Recommendation: Replace the gutters and downspouts.

Exterior Enclosure

Exterior Walls

- Analysis: The exterior walls are brick veneer which is in good condition.
- Recommendation: No corrective action required.

Exterior Windows

- Analysis: The room windows are insulated glass units which are in good condition. However, the bathroom windows are single pane glazing which are in fair condition.
- Recommendation: Replace the bathroom window units.

Exterior Doors

- Analysis: The exterior doors are hollow metal and in good condition.
- Recommendation: No corrective action required.

Roofing

Roof Coverings

- Analysis: The roof covering is EPDM which is approximately 14 years old and is in fair condition.
- Recommendation: Replace the roofing.

Interior Construction

Partitions

- Analysis: The poured concrete partitions are structurally sound.
- Recommendation: No corrective action required.

Interior Doors

- Analysis: The interior wood doors are in fair condition.
- Recommendation: Replace the interior wood doors.

Interior Finishes

Wall Finishes

- Analysis: The interior wall coverings and paint are in fair condition.
- Recommendation: Paint the interior walls and replace the vinyl wall coverings.

Floor Finishes

- Analysis: The carpet is in fair condition.
- Recommendation: Replace the carpet.

Ceiling Finishes

- Analysis: The ceiling finishes are: A/C tile and grid in the public areas and the painted ceilings in the rooms. They are in fair condition.
- Recommendation: Replace the acoustical ceiling tile and paint the ceiling in the guest rooms.

Plumbing

Plumbing Fixtures

- Analysis: The water closets are in fair condition.
- Recommendation: Replace all of the water closets in the shared bathrooms.

Domestic Water Distribution

- Analysis: The water distribution system has been updated with high efficiency water heater. It is in good condition.
- Recommendation: No corrective action required.

HVAC

Cooling Generating Systems

- Analysis: The units have 2 pipe fan coil units.
- Recommendation: Install PTAC units.

Fire Protection

Sprinklers

- Analysis: The sprinkler system is in good condition.
- Recommendation: No corrective action required.

Electrical

Electrical Service/Distribution

- Analysis: The main electrical service is insufficient for the installation of PTAC units.
- Recommendation: Replace the main electrical service into the building.

Communications and Security

- Analysis: The fire alarm system is in good condition .
- Recommendation: No corrective action required.

Equipment

Other Equipment

- Analysis: The washing machines are in fair condition.
- Recommendation: Replace the washers.

Site Preparation

Site Earthwork

- Analysis: The site is in good condition.
- Recommendation: No corrective action required.

Major Functional Criteria

Major Functional Criteria Analysis

The following are existing conditions that do not meet the Functional Criteria and are considered major deficits. Listed are the recommendations or solutions for remedying each deficit.

- **Back-of-House Spaces**

Most of the back-of-the-house spaces are required at the main lodging building on post. Presently these are located in building 470, and are not included in this building.

- **Family Guest Suite**

Room Size and Configuration: The rooms do not meet size and configuration requirements, as the rooms have shared baths.

Recommendation: A Renovation Cost estimate is used to indicate a total redo of rooms to meet the standard. This renovation cost will make the building more than 50% of the new construction cost.

- **Public Spaces**

Most of the back-of-the-house spaces are required at the main lodging building on post. Presently these are located in building 470, and are not included in this building.

Condition Assessment/Renovation/Replacement Analysis

Condition Assessments

The Condition Assessment Cost lists what is required to make the building well as it is currently functioning. The cost includes all deficient items based on our field observation and using the Army Lodging standard Cap Ex replacement schedule.

Summary of Project Cost

CSI	Percent	Amount
07 Thermal & Moisture Protection	4.93%	\$34,301.88
Gutters: Damaged or Failing		\$7,300.00
Roofing: Beyond Useful Life		\$27,001.88
08 Doors & Windows	17.03%	\$118,514.51
Al. Windows - Beyond Useful Life		\$15,866.51
Wood Door - Beyond Useful Life		\$102,648.00
09 Finishes	11.60%	\$80,733.17
Acoustical Ceiling & Grid: Beyond expt useful life		\$4,264.25
Carpet: Beyond Useful Life		\$44,595.40
Interior ceilings: Paint Failing		\$8,099.52
Interior walls: Paint failing		\$21,060.00
Vinyl Wall Covering: Beyond expected useful life		\$2,714.00
11 Equipment	0.36%	\$2,500.00
Washing Machine: Beyond expected useful life.		\$2,500.00
15 Mechanical	19.63%	\$136,629.90
PTAC: Missing or inadequate		\$105,912.00
Water closet: Beyond expected useful life		\$30,717.90
16 Electrical	3.35%	\$23,320.00
Main service: Beyond expected useful life		\$23,320.00
19 FF&E	43.10%	\$300,000.00
Hard and soft goods: Beyond expected useful life		\$300,000.00
Total Raw Cost	100.00%	\$695,999.00

Additional Hard Cost (Template: Army Lodging Renovation)

Parameter Name	Percent	Amount
Spirit	0.50%	\$3,827.99
Force Protection	9.00%	\$69,248.42
General Conditions	10.00%	\$69,599.90
Total Additional Hard Cost		\$142,676.32

Soft Cost (Template: Army Lodging Renovation)

Parameter Name	Percent	Amount
Contingency	10.00%	\$83,867.53
SIOH Conus	6.50%	\$59,965.29
Design	10.00%	\$83,867.53
08 MYr Inflation Fct	9.93%	\$105,891.10
Total Soft Cost		\$333,591.45
Total Project		\$1,172,266.77

Renovation

The Renovation Cost is based on making changes to the building to meet the Army Lodging Standard Functional Criteria. Unless otherwise stated, this cost also includes all building deficiencies listed under the Condition Assessment Cost.

Summary of Project Renovation Cost

CSI	Percent	Amount
03 Concrete	0.86%	\$14,700.00
Stair Construction		\$14,700.00
07 Thermal & Moisture Protection	2.81%	\$48,361.75
Roof Construction		\$31,438.85
Roof Coverings		\$16,922.90
08 Doors & Windows	11.54%	\$198,368.00
Exterior Windows		\$152,000.00
Interior Doors		\$46,368.00
09 Finishes	29.79%	\$512,110.18
Ceiling Finishes		\$93,498.30
Floor Finishes		\$118,797.70
Partitions		\$114,457.06
Wall Finishes		\$185,357.12
11 Equipment	3.96%	\$68,000.00
Other Equipment		\$68,000.00
13 Special Construction	7.73%	\$132,831.30
Communications & Security		\$59,796.15
Sprinklers		\$73,035.15
15 Mechanical	23.15%	\$397,969.20
Cooling Generating Systems		\$257,719.20
Domestic Water Dist		\$40,800.00
Plumbing Fixtures		\$99,450.00
16 Electrical	10.27%	\$176,520.00
Electrical Service & Distribution		\$176,520.00
19 FF&E	9.89%	\$170,000.00
Interior FF&E allowance		\$170,000.00
Total Raw Cost	100.00%	\$1,718,860.42

Additional Hard Cost (Template: Army Lodging Renovation)

Parameter Name	Percent	Amount
Spirit	0.50%	\$9,453.73
Force Protection	9.00%	\$171,018.02
General Conditions	10.00%	\$171,886.04
Total Additional Hard Cost		\$352,357.79

Soft Cost (Template: Army Lodging Renovation)

Parameter Name	Percent	Amount
Contingency	10.00%	\$207,121.82
SIOH Conus	6.50%	\$148,092.10
Design	10.00%	\$207,121.82
08 MYr Inflation Fct	9.93%	\$261,511.91
Total Soft Cost		\$823,847.65

Total Project Cost for Renovation	\$2,895,065.87
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Replacement

The Replacement Cost is the cost to rebuild the units as part of a new facility including the appropriate back-of-house and public spaces. This cost is based on number and types of units in the renovation model.

Summary of Project Replacement Cost

CSI	Percent	Amount
02 Site Work	1.55%	\$39,854.56
Site Earthwork		\$39,854.56
03 Concrete	25.04%	\$643,892.67
Floor Construction		\$496,572.67
Slab on Grade		\$29,465.00
Standard Foundations		\$117,855.00
04 Masonry	5.74%	\$147,594.75
Exterior Walls		\$147,594.75
07 Thermal & Moisture Protection	5.43%	\$139,675.99
Roof Construction		\$66,795.35
Roof Coverings		\$72,880.64
08 Doors & Windows	7.97%	\$204,947.00
Exterior Doors		\$6,165.00
Exterior Windows		\$152,000.00
Interior Doors		\$46,782.00
09 Finishes	15.70%	\$403,609.85
Ceiling Finishes		\$69,252.18
Floor Finishes		\$114,538.69
Partitions		\$114,457.06
Wall Finishes		\$105,361.92
11 Equipment	2.64%	\$68,000.00
Other Equipment		\$68,000.00
13 Special Construction	5.52%	\$141,897.42
Communications & Security		\$63,877.41
Sprinklers		\$78,020.01
15 Mechanical	16.16%	\$415,559.28
Cooling Generating Systems		\$275,309.28
Domestic Water Dist		\$40,800.00
Plumbing Fixtures		\$99,450.00
16 Electrical	7.64%	\$196,508.00
Electrical Service & Distribution		\$196,508.00
19 FF&E	6.61%	\$170,000.00
Interior FF&E allowance		\$170,000.00
Total Raw Cost	100.00%	\$2,571,539.52

Additional Hard Cost (Template: Army Lodging New Construction)

Parameter Name	Percent	Amount
Spirit	0.50%	\$14,143.47
Force Protection	0.00%	\$0.00
General Cond	10.00%	\$257,153.95
Total Additional Hard Cost		\$271,297.42

Soft Cost (Template: Army Lodging New Construction)

Parameter Name	Percent	Amount
Contingency	5.00%	\$142,141.85
SIOH Conus	6.50%	\$194,023.62
Design	10.00%	\$284,283.69
08 MYr Inflation Fct	9.93%	\$343,904.31
Total Soft Cost		\$964,353.47
Total Project Cost for Replacement		\$3,807,190.41

INSERT BUILDING 505 FLOOR PLANS HERE



Building 506

Building 506

Building 506 was constructed in 1956. The 22,065 square foot facility contains 60 lodging units. The building is functioning as 29 family suites.

Significant Assumptions

The replacement and renovation cost models are based on 34 family suites.

The renovation uses the existing foot print, with the plan reworked to meet current lodging size requirements.

The renovation cost includes all condition assessment costs.

The renovation and replacement cost models include any public or back-of-the-house spaces as outlined in the Areas and Occupancies Schedule Template included in the Appendix.

All costs are adjusted by the Area Cost Factor of 100% for Ft Belvoir.

Cost Analysis

Renovation Cost	\$2,895,065.00
Replacement Cost	\$3,807,190.00
Renovation to Replacement Cost Ratio	76.04%

Because the Renovation to Replacement Cost Ratio is greater than 50%, renovation of Building 506 is not recommended.

Attributes

01.Number of Units Constructed	60
02.Number of Units Used	45
03.Back of House Function	No
04.Single Room w/o FullKitchen	0
05.Single Room w/ Full Kitchen	0
06.Multi Room wo/ Full Kitchen	30
07.Multi Room w/ Full Kitchen	0
08.DVQ wo/ Full Kitchen	0
09.DVQ w/ Full Kitchen	0
10.Operating as Standard Room	0
11.Operating as Extended Stay	0
12.Operating as Family Suite	29
13.Renovated to Standard	0
14.Renovated to Extended Stay	0
15.Renovated to Family Suite	34
16.Delta renovation	-26

Condition Analysis/Recommendation

FF&E

FF&E Allowance

- Analysis: The FF&E items are in fair condition.
- Recommendation: Replace the FF&E.

Foundations

Standard Foundations

- Analysis: The foundation is reinforced concrete with no visible signs of failure.
- Recommendation: No corrective action required.

Slab on Grade

- Analysis: The slab on grade is concrete and is in good condition.
- Recommendation: No corrective action required.

Superstructure

Floor Construction

- Analysis: The floor construction is poured concrete and is in good condition,
- Recommendation: No corrective action required.

Roof Construction

- Analysis: The roof is poured concrete slab in good condition. The gutters and downspouts are in fair condition.
- Recommendation: Replace the gutters and downspouts.

Exterior Enclosure

Exterior Walls

- Analysis: The exterior walls are brick veneer which are in good condition.
- Recommendation: No corrective action required.

Exterior Windows

- Analysis: The room windows are insulated glass units which are in good condition. The bathroom windows are single pane glazing which are in fair condition.
- Recommendation: Replace the bathroom window units.

Exterior Doors

- Analysis: The exterior doors are hollow metal in good condition.
- Recommendation: No corrective action required.

Roofing

Roof Coverings

- Analysis: The roof covering is EPDM which is approximately 14 years old and in poor condition.

- Recommendation: Replace the roof.

Interior Construction

Partitions

- Analysis: The interior partitions are poured concrete that are in good condition.
- Recommendation: No corrective action required.

Interior Doors

- Analysis: The interior wood doors are in fair condition.
- Recommendation: Replace the interior wood doors.

Interior Finishes

Wall Finishes

- Analysis: The interior wall covering and paint is in fair condition.
- Recommendation: Paint the interior walls and replace the vinyl wall coverings.

Floor Finishes

- Analysis: The carpet is in fair condition.
- Recommendation: Replace the carpet.

Ceiling Finishes

- Analysis: The ceiling finishes are: acoustical ceiling tile and grid in the public areas and painted ceilings in the rooms. They are in fair condition.
- Recommendation: Replace the acoustical ceiling tile system and paint the ceilings in the guest rooms.

Plumbing

Plumbing Fixtures

- Analysis: The water closets are in fair condition.
- Recommendation: Replace all of the water closets in the shared bathrooms.

Domestic Water Distribution

- Analysis: The water distribution has been updated with high efficiency water heater. No visible problems with the distribution system was observed.
- Recommendation: No corrective action required.

HVAC

Cooling Generating Systems

- Analysis: The units have 2 pipe fan coil units which are in fair condition.
- Recommendation: Install the PTAC units.

Fire Protection

Sprinklers

- Analysis: The sprinkler system is in good condition.
- Recommendation: No corrective action required.

Electrical

Electrical Service/Distribution

- Analysis: The main electrical service is insufficient for the installation of PTAC units and is in fair condition.
- Recommendation: Replace the main electrical service.

Communications and Security

- Analysis: The fire alarm system is in good condition .
- Recommendation: No corrective action required.

Equipment

Other Equipment

- Analysis: The washing machines are in fair condition.
- Recommendation: Replace the washing machines.

Site Preparation

Site Earthwork

- Analysis: The site is in good condition.
- Recommendation: No corrective action required.

Major Functional Criteria

Major Functional Criteria Analysis

The following are existing conditions that do not meet the Functional Criteria and are considered major deficits. Listed are the recommendations or solutions for remedying each deficit.

- **Back-of-House Spaces**

Most of the back-of-the-house spaces are required at the main lodging building on post. Presently these are located in building 470, and are not included in this building.

- **Family Guest Suite**

Room Size and Configuration: The rooms do not meet size and configuration requirements, as the rooms have shared baths.

Recommendation: A Renovation Cost estimate is used to indicate a total redo of rooms to meet the standard. This renovation cost will make the building more than 50% of the new construction cost.

- **Public Spaces**

Most of the back-of-the-house spaces are required at the main lodging building on post. Presently these are located in building 470, and are not included in this building.

Condition Assessment/Renovation/Replacement Analysis

Condition Assessments

The Condition Assessment Cost lists what is required to make the building well as it is currently functioning. The cost includes all deficient items based on our field observation and using the Army Lodging standard Cap Ex replacement schedule.

Summary of Project Cost

CSI	Percent	Amount
07 Thermal & Moisture Protection	4.88%	\$34,301.88
Gutters: Damaged or Failing		\$7,300.00
Roofing: Beyond Useful Life		\$27,001.88
08 Doors & Windows	16.86%	\$118,514.51
Al. Windows - Beyond Useful Life		\$15,866.51
Wood Door - Beyond Useful Life		\$102,648.00
09 Finishes	11.48%	\$80,733.17
Acoustical Ceiling & Grid: Beyond expt useful life		\$4,264.25
Carpet: Beyond Useful Life		\$44,595.40
Interior ceilings: Paint Failing		\$8,099.52
Interior walls: Paint failing		\$21,060.00
Vinyl Wall Covering: Beyond expected useful life		\$2,714.00
11 Equipment	0.36%	\$2,500.00
Washing Machine: Beyond expected useful life.		\$2,500.00
15 Mechanical	20.44%	\$143,690.70
Hydronic heating system: Beyond expt useful life		\$112,972.80
Water closet: Beyond expected useful life		\$30,717.90
16 Electrical	3.32%	\$23,320.00
Main service: Beyond expected useful life		\$23,320.00
19 FF&E	42.67%	\$300,000.00
Hard and soft goods: Beyond expected useful life		\$300,000.00
Total Raw Cost	100.00%	\$703,060.00

Additional Hard Cost (Template: Army Lodging Renovation)

Parameter Name	Percent	Amount
Spirit	0.50%	\$3,866.83
Force Protection	9.00%	\$69,950.95
General Conditions	10.00%	\$70,306.00
Total Additional Hard Cost		\$144,123.78

Soft Cost (Template: Army Lodging Renovation)

Parameter Name	Percent	Amount
Contingency	10.00%	\$84,718.38
SIOH Conus	6.50%	\$60,573.64
Design	10.00%	\$84,718.38
08 MYr Inflation Fct	9.93%	\$106,965.38
Total Soft Cost		\$336,975.78
Total Project		\$1,184,159.56

Renovation

The Renovation Cost is based on making changes to the building to meet the Army Lodging Standard Functional Criteria. Unless otherwise stated, this cost also includes all building deficiencies listed under the Condition Assessment Cost.

Summary of Project Renovation Cost

CSI	Percent	Amount
03 Concrete	0.86%	\$14,700.00
Stair Construction		\$14,700.00
07 Thermal & Moisture Protection	2.81%	\$48,361.75
Roof Construction		\$31,438.85
Roof Coverings		\$16,922.90
08 Doors & Windows	11.54%	\$198,368.00
Exterior Windows		\$152,000.00
Interior Doors		\$46,368.00
09 Finishes	29.79%	\$512,110.18
Ceiling Finishes		\$93,498.30
Floor Finishes		\$118,797.70
Partitions		\$114,457.06
Wall Finishes		\$185,357.12
11 Equipment	3.96%	\$68,000.00
Other Equipment		\$68,000.00
13 Special Construction	7.73%	\$132,831.30
Communications & Security		\$59,796.15
Sprinklers		\$73,035.15
15 Mechanical	23.15%	\$397,969.20
Cooling Generating Systems		\$257,719.20
Domestic Water Dist		\$40,800.00
Plumbing Fixtures		\$99,450.00
16 Electrical	10.27%	\$176,520.00
Electrical Service & Distribution		\$176,520.00
19 FF&E	9.89%	\$170,000.00
Interior FF&E allowance		\$170,000.00
Total Raw Cost	100.00%	\$1,718,860.42

Additional Hard Cost (Template: Army Lodging Renovation)

Parameter Name	Percent	Amount
Spirit	0.50%	\$9,453.73
Force Protection	9.00%	\$171,018.02
General Conditions	10.00%	\$171,886.04
Total Additional Hard Cost		\$352,357.79

Soft Cost (Template: Army Lodging Renovation)

Parameter Name	Percent	Amount
Contingency	10.00%	\$207,121.82
SIOH Conus	6.50%	\$148,092.10
Design	10.00%	\$207,121.82
08 MYr Inflation Fct	9.93%	\$261,511.91
Total Soft Cost		\$823,847.65

Total Project Cost for Renovation	\$2,895,065.87
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Replacement

The Replacement Cost is the cost to rebuild the units as part of a new facility including the appropriate back-of-house and public spaces. This cost is based on number and types of units in the renovation model.

Summary of Project Replacement Cost

CSI	Percent	Amount
02 Site Work	1.55%	\$39,854.56
Site Earthwork		\$39,854.56
03 Concrete	25.04%	\$643,892.67
Floor Construction		\$496,572.67
Slab on Grade		\$29,465.00
Standard Foundations		\$117,855.00
04 Masonry	5.74%	\$147,594.75
Exterior Walls		\$147,594.75
07 Thermal & Moisture Protection	5.43%	\$139,675.99
Roof Construction		\$66,795.35
Roof Coverings		\$72,880.64
08 Doors & Windows	7.97%	\$204,947.00
Exterior Doors		\$6,165.00
Exterior Windows		\$152,000.00
Interior Doors		\$46,782.00
09 Finishes	15.70%	\$403,609.85
Ceiling Finishes		\$69,252.18
Floor Finishes		\$114,538.69
Partitions		\$114,457.06
Wall Finishes		\$105,361.92
11 Equipment	2.64%	\$68,000.00
Other Equipment		\$68,000.00
13 Special Construction	5.52%	\$141,897.42
Communications & Security		\$63,877.41
Sprinklers		\$78,020.01
15 Mechanical	16.16%	\$415,559.28
Cooling Generating Systems		\$275,309.28
Domestic Water Dist		\$40,800.00
Plumbing Fixtures		\$99,450.00
16 Electrical	7.64%	\$196,508.00
Electrical Service & Distribution		\$196,508.00
19 FF&E	6.61%	\$170,000.00
Interior FF&E allowance		\$170,000.00
Total Raw Cost	100.00%	\$2,571,539.52

Additional Hard Cost (Template: Army Lodging New Construction)

Parameter Name	Percent	Amount
Spirit	0.50%	\$14,143.47
Force Protection	0.00%	\$0.00
General Cond	10.00%	\$257,153.95
Total Additional Hard Cost		\$271,297.42

Soft Cost (Template: Army Lodging New Construction)

Parameter Name	Percent	Amount
Contingency	5.00%	\$142,141.85
SIOH Conus	6.50%	\$194,023.62
Design	10.00%	\$284,283.69
08 MYr Inflation Fct	9.93%	\$343,904.31
Total Soft Cost		\$964,353.47
Total Project Cost for Replacement		\$3,807,190.41

INSERT BUILDING 506 FLOOR PLANS HERE



Building 507

Building 507

Building 507 was constructed in 1969 and under went major renovation in 1998. The 19,008 square foot facility contains 42 lodging units functioning as 38 extended stay rooms and 4 family suites.

Significant Assumptions

The replacement cost model is based on 37 extended stay rooms 4 family suites.

The renovation uses the existing foot print, with the plan reworked to meet current lodging size requirements.

This building is in good condition for both the Condition Assessment and Function Criteria. In this building the Condition Assessment costs include the wellness items and the Renovation Cost includes functional renovations but not Condition Assessment cost due to the limited nature of the renovation. Therefore in the Cost Analysis the sum of the Condition Assessment and Renovation cost is used for the ratio to the Replacement Cost

The renovation and replacement cost models include any public or back-of-the-house spaces as outlined in the Areas and Occupancies Schedule Template included in the Appendix.

All costs are adjusted by the Area Cost Factor of 100% for Fort Belvoir.

Cost Analysis

Condition Assessment & Renovation Cost	\$776,725.00
Replacement Cost	\$3,291,445.00
Condition Assessment & Renovation to Replacement Cost Ratio	23.60%

Because the sum of the Condition Assessment and Renovation Costs to Replacement Cost Ratio is less than 50%, repair and continued use of Building 507 is recommended.

Attributes

01.Number of Units Constructed	42
02.Number of Units Used	42
03.Back of House Function	Yes
04.Single Room w/o FullKitchen	0
05.Single Room w/ Full Kitchen	38
06.Multi Room wo/ Full Kitchen	0
07.Multi Room w/ Full Kitchen	4
08.DVQ wo/ Full Kitchen	0
09.DVQ w/ Full Kitchen	0
10.Operating as Standard Room	0
11.Operating as Extended Stay	38
12.Operating as Family Suite	4
13.Renovated to Standard	0
14.Renovated to Extended Stay	37
15.Renovated to Family Suite	4
16.Delta renovation	-1

Condition Analysis/Recommendation

FF&E

FF&E Allowance

- Analysis: The building had a major renovation in 1999. The FF&E which consists of a bed with headboard, dresser, night stand , desk with chair, TV/VCR and lamp is in fair condition.
- Recommendation: Replace the FF&E.

Foundations

Standard Foundations

- Analysis: The foundation is concrete and block which appears to be in good condition.
- Recommendation: No corrective action required.

Slab on Grade

- Analysis: The slab on grade is sound and in good condition.
- Recommendation: No corrective action required.

Superstructure

Floor Construction

- Analysis: The floor construction is wood floor joist. The floor is sound and in good condition.
- Recommendation: No corrective action required.

Roof Construction

- Analysis: The roof construction is wood trusses which appear to be in good condition.
- Recommendation: No corrective action required.

Exterior Enclosure

Exterior Walls

- Analysis: The exterior wall are brick veneer and are in good condition.
- Recommendation: No corrective action required.

Exterior Windows

- Analysis: The exterior windows are insulated glass units and are in good condition.
- Recommendation: No corrective action required.

Exterior Doors

- Analysis: The exterior doors are hollow metal and in good condition.
- Recommendation: No corrective action required.

Roofing

Roof Coverings

- Analysis: The roof covering is in good condition. The roof on the porch section should be replaced if the roof are going to match.
- Recommendation: No corrective action required.

Interior Construction

Partitions

- Analysis: The partitions drywall on studs are in good condition.
- Recommendation: No corrective action required.

Interior Doors

- Analysis: The interior doors are wood and in good condition.
- Recommendation: No corrective action required.

Stairs

Stair Construction

- Analysis: The stair construction at the breezeway and exterior stair towers are concrete and in good condition.
- Recommendation: No corrective action required.

Interior Finishes

Wall Finishes

- Analysis: The unit walls are entirely covered with vinyl which is in fair condition.
- Recommendation: Replace the vinyl wall covering.

Floor Finishes

- Analysis: The floor finishes are carpet and an area of VCT front of the kitchen unit. These are in fair condition.
- Recommendation: Replace the floor finishes.

Ceiling Finishes

- Analysis: The ceiling is painted drywall. The ceilings is in fair condition.
- Recommendation: Paint the ceilings.

Plumbing

Plumbing Fixtures

- Analysis: The bathroom fixtures are in like new condition.
- Recommendation: No corrective action required.

Domestic Water Distribution

- Analysis: The domestic water distribution system appears to be good in good condition.
- Recommendation: No corrective action required.

HVAC

Cooling Generating Systems

- Analysis: The building has its own central boiler and A/C system which is in good condition.
- Recommendation: No corrective action required.

Fire Protection

Sprinklers

- Analysis: The sprinkler system is in good condition.
- Recommendation: No corrective action required.

Electrical

Electrical Service/Distribution

- Analysis: The electrical service is 800 amp Siemens 208/120 3Phase in good condition
- Recommendation: No corrective action required.

Communications and Security

- Analysis: The fire alarm (King Fisher) is in like new condition.
- Recommendation: No corrective action required.

Equipment

Other Equipment

- Analysis: The washing machine is in fair condition.
- Recommendation: Replace the washing machines.

Site Preparation

Site Earthwork

- Analysis: The surrounding area is in good condition.
- Recommendation: No corrective action required.

Major Functional Criteria

Major Functional Criteria Analysis

The following are existing conditions that do not meet the Functional Criteria and are considered major deficits. Listed are the recommendations or solutions for remedying each deficit.

- **Back-of-House Spaces**

Most of the back-of-the-house spaces are required at the main lodging building on post. Presently these are located in building 470, and are not included in this building.

- **Public Spaces**

Most of the back-of-the-house spaces are required at the main lodging building on post. Presently these are located in building 470, and are not included in this building.

Condition Assessment/Renovation/Replacement Analysis

Condition Assessments

The Condition Assessment Cost lists what is required to make the building well as it is currently functioning. The cost includes all deficient items based on our field observation and using the Army Lodging standard Cap Ex replacement schedule.

Summary of Project Cost

CSI	Percent	Amount
09 Finishes	27.17%	\$117,007.24
Carpet: Beyond Useful Life		\$33,419.74
Interior ceilings: Paint Failing		\$9,322.00
VCT: Beyond Useful Life		\$5,872.70
Vinyl Wall Covering: Beyond expected useful life		\$68,392.80
11 Equipment	0.58%	\$2,500.00
Washing Machine: Beyond expected useful life.		\$2,500.00
15 Mechanical	18.85%	\$81,199.20
Hydronic heating system: Beyond expt useful life		\$81,199.20
19 FF&E	53.40%	\$230,000.00
Hard and soft goods: Beyond expected useful life		\$230,000.00
Total Raw Cost	100.00%	\$430,706.00

Additional Hard Cost (Template: Army Lodging Renovation)

Parameter Name	Percent	Amount
Spirit	0.50%	\$2,368.88
Force Protection	9.00%	\$42,853.09
General Conditions	10.00%	\$43,070.60
Total Additional Hard Cost		\$88,292.58

Soft Cost (Template: Army Lodging Renovation)

Parameter Name	Percent	Amount
Contingency	10.00%	\$51,899.86
SIOH Conus	6.50%	\$37,108.40
Design	10.00%	\$51,899.86
08 MYr Inflation Fct	9.93%	\$65,528.73
Total Soft Cost		\$206,436.85
Total Project		\$725,435.42

Renovation

The Renovation Cost is based on making changes to the building to meet the Army Lodging Standard Functional Criteria. Unless otherwise stated, this cost also includes all building deficiencies listed under the Condition Assessment Cost.

Summary of Project Renovation Cost

CSI	Percent	Amount
09 Finishes	55.69%	\$16,960.20
Ceiling Finishes		\$2,630.40
Floor Finishes		\$3,532.80
Partitions		\$3,659.10
Wall Finishes		\$7,137.90
11 Equipment	9.85%	\$3,000.00
Other Equipment		\$3,000.00
13 Special Construction	3.94%	\$1,200.00
Communications & Security		\$720.00
Sprinklers		\$480.00
15 Mechanical	21.06%	\$6,412.00
Cooling Generating Systems		\$1,920.00
Domestic Water Dist		\$1,200.00
Plumbing Fixtures		\$3,292.00
16 Electrical	9.46%	\$2,880.00
Lighting & Branch Wiring		\$2,880.00
Total Raw Cost	100.00%	\$30,452.20

Additional Hard Cost (Template: Army Lodging Renovation)

Parameter Name	Percent	Amount
Spirit	0.50%	\$167.49
Force Protection	9.00%	\$3,029.84
General Conditions	10.00%	\$3,045.22
Total Additional Hard Cost		\$6,242.55

Soft Cost (Template: Army Lodging Renovation)

Parameter Name	Percent	Amount
Contingency	10.00%	\$3,669.47
SIOH Conus	6.50%	\$2,623.67
Design	10.00%	\$3,669.47
08 MYr Inflation Fct	9.93%	\$4,633.08
Total Soft Cost		\$14,595.70
Total Project Cost for Renovation		\$51,290.45

Replacement

The Replacement Cost is the cost to rebuild the units as part of a new facility including the appropriate back-of-house and public spaces. This cost is based on number and types of units in the renovation model.

Summary of Project Replacement Cost

CSI	Percent	Amount
02 Site Work	1.87%	\$41,669.75
Site Earthwork		\$41,669.75
03 Concrete	19.68%	\$437,627.30
Floor Construction		\$299,692.30
Slab on Grade		\$30,810.00
Stair Construction		\$14,700.00
Standard Foundations		\$92,425.00
04 Masonry	5.50%	\$122,356.83
Exterior Walls		\$122,356.83
07 Thermal & Moisture Protection	5.72%	\$127,102.03
Roof Construction		\$50,919.56
Roof Coverings		\$76,182.46
08 Doors & Windows	10.16%	\$225,909.00
Exterior Doors		\$6,165.00
Exterior Windows		\$180,000.00
Interior Doors		\$39,744.00
09 Finishes	14.91%	\$331,372.97
Ceiling Finishes		\$54,309.33
Floor Finishes		\$122,905.23
Partitions		\$84,433.61
Wall Finishes		\$69,724.80
11 Equipment	3.69%	\$82,000.00
Other Equipment		\$82,000.00
13 Special Construction	5.01%	\$111,279.70
Communications & Security		\$50,094.35
Sprinklers		\$61,185.35
15 Mechanical	17.32%	\$385,029.80
Cooling Generating Systems		\$215,904.80
Domestic Water Dist		\$49,200.00
Plumbing Fixtures		\$119,925.00
16 Electrical	6.92%	\$153,835.00
Electrical Service & Distribution		\$153,835.00
19 FF&E	9.22%	\$205,000.00
Interior FF&E allowance		\$205,000.00
Total Raw Cost	100.00%	\$2,223,182.38

Additional Hard Cost (Template: Army Lodging New Construction)

Parameter Name	Percent	Amount
Spirit	0.50%	\$12,227.50
Force Protection	0.00%	\$0.00
General Cond	10.00%	\$222,318.24
Total Additional Hard Cost		\$234,545.74

Soft Cost (Template: Army Lodging New Construction)

Parameter Name	Percent	Amount
Contingency	5.00%	\$122,886.41
SIOH Conus	6.50%	\$167,739.94
Design	10.00%	\$245,772.81
08 MYr Inflation Fct	9.93%	\$297,316.84
Total Soft Cost		\$833,716.00
Total Project Cost for Replacement		\$3,291,444.12

INSERT BUILDING 507 FLOOR PLANS HERE



Building 508

Building 508

Building 508 was constructed in 1969 and under went major renovation in 2000. The 19,008 square foot facility contains 42 lodging units functioning as 38 extended stay rooms and 4 family suites.

Significant Assumptions

The replacement cost model is based on 37 extended stay rooms 4 family suites.

The renovation uses the existing foot print, with the plan reworked to meet current lodging size requirements.

This building is in good condition for both the Condition Assessment and Function Criteria. In this building the Condition Assessment costs include the wellness items and the Renovation Cost includes functional renovations but not Condition Assessment cost due to the limited nature of the renovation. Therefore in the Cost Analysis the sum of the Condition Assessment and Renovation cost is used for the ratio to the Replacement Cost

The renovation and replacement cost models include any public or back-of-the-house spaces as outlined in the Areas and Occupancies Schedule Template included in the Appendix.

All costs are adjusted by the Area Cost Factor of 100% for Fort Belvoir.

Cost Analysis

Condition Assessment & Renovation Cost	\$774,620.00
Replacement Cost	\$3,291,445.00
Condition Assessment & Renovation to Replacement Cost Ratio	23.53%

Because the sum of the Condition Assessment and Renovation Costs to Replacement Cost Ratio is less than 50%, repair and continued use of Building 508 is recommended.

Attributes

01.Number of Units Constructed	42
02.Number of Units Used	42
03.Back of House Function	Yes
04.Single Room w/o FullKitchen	0
05.Single Room w/ Full Kitchen	38
06.Multi Room wo/ Full Kitchen	0
07.Multi Room w/ Full Kitchen	4
08.DVQ wo/ Full Kitchen	0
09.DVQ w/ Full Kitchen	0
10.Operating as Standard Room	0
11.Operating as Extended Stay	38
12.Operating as Family Suite	4
13.Renovated to Standard	0
14.Renovated to Extended Stay	37
15.Renovated to Family Suite	4
16.Delta renovation	-1

Condition Analysis/Recommendation

FF&E

FF&E Allowance

- Analysis: The building was completely renovated in 1999. The FF&E, which consists of Bed with headboard, dresser, night stand , desk with chair, TV/VCR and lamp is in fair condition.
- Recommendation: Replace the FF&E.

Foundations

Standard Foundations

- Analysis: The foundation is concrete and block which appears to be in good condition.
- Recommendation: No corrective action required.

Slab on Grade

- Analysis: The slab on grade is sound and in good condition.
- Recommendation: No corrective action required.

Superstructure

Floor Construction

- Analysis: The floor construction is wood floor joist. The floor is sound and in good condition.
- Recommendation: No corrective action required.

Roof Construction

- Analysis: The roof construction is wood trusses which appear to be in good condition.
- Recommendation: No corrective action required.

Exterior Enclosure

Exterior Walls

- Analysis: The exterior walls are brick veneer and are in good condition.
- Recommendation: No corrective action required.

Exterior Windows

- Analysis: The exterior windows are insulated glass units and are in good condition.
- Recommendation: No corrective action required.

Exterior Doors

- Analysis: The exterior doors are hollow metal and in good condition.
- Recommendation: No corrective action required.

Roofing

Roof Coverings

- Analysis: The building's roof covering is in good condition. The roof on the porch section was installed during the renovation.
- Recommendation: No corrective action required.

Interior Construction

Partitions

- Analysis: The partitions are drywall on studs and are in good condition.
- Recommendation: No corrective action required.

Interior Doors

- Analysis: The interior doors are wood and in good condition.
- Recommendation: No corrective action required.

Stairs

Stair Construction

- Analysis: The stair construction at the breezeway and exterior stair towers are concrete and in good condition.
- Recommendation: No corrective action required.

Interior Finishes

Wall Finishes

- Analysis: The unit walls are covered entirely with vinyl that is in fair condition.
- Recommendation: Replace the vinyl wall covering.

Floor Finishes

- Analysis: The floor finishes are carpet and an area of VCT in front of the kitchen unit. They are in fair condition.
- Recommendation: Replace the floor finishes.

Ceiling Finishes

- Analysis: The ceiling is painted drywall. The ceilings are in fair condition.
- Recommendation: Paint the ceilings.

Plumbing

Plumbing Fixtures

- Analysis: The bathroom fixtures are in like new condition.
- Recommendation: No corrective action required.

Domestic Water Distribution

- Analysis: The domestic water distribution system appears to be in good condition.
- Recommendation: No corrective action required.

HVAC

Cooling Generating Systems

- Analysis: The building has its own central boiler and A/C system which is in good condition.
- Recommendation: No corrective action required.

Fire Protection

Sprinklers

- Analysis: The sprinkler system is in good condition.
- Recommendation: No corrective action required.

Electrical

Electrical Service/Distribution

- Analysis: The electrical service is 800 amp Siemens 208/120 3Phase in good condition
- Recommendation: No corrective action required.

Communications and Security

- Analysis: The fire alarm (King Fisher) is in good condition.
- Recommendation: No corrective action required.

Equipment

Other Equipment

- Analysis: The washing machines are in fair condition.
- Recommendation: Replace the washing machines.

Site Preparation

Site Earthwork

- Analysis: The surrounding area is in good condition.
- Recommendation: No corrective action required.

Major Functional Criteria

Major Functional Criteria Analysis

The following are existing conditions that do not meet the Functional Criteria and are considered major deficits. Listed are the recommendations or solutions for remedying each deficit.

- **Back-of-House Spaces**

Most of the back-of-the-house spaces are required at the main lodging building on post. Presently these are located in building 470, and are not included in this building.

- **Public Spaces**

Most of the back-of-the-house spaces are required at the main lodging building on post. Presently these are located in building 470, and are not included in this building.

Condition Assessment/Renovation/Replacement Analysis

Condition Assessments

The Condition Assessment Cost lists what is required to make the building well as it is currently functioning. The cost includes all deficient items based on our field observation and using the Army Lodging standard Cap Ex replacement schedule.

Summary of Project Cost

CSI	Percent	Amount
09 Finishes	27.25%	\$117,007.24
Carpet: Beyond Useful Life		\$33,419.74
Interior ceilings: Paint Failing		\$9,322.00
VCT: Beyond Useful Life		\$5,872.70
Vinyl Wall Covering: Beyond expected useful life		\$68,392.80
11 Equipment	0.29%	\$1,250.00
Washing Machine: Beyond expected useful life.		\$1,250.00
15 Mechanical	18.91%	\$81,199.20
Hydronic heating system: Beyond expt useful life		\$81,199.20
19 FF&E	53.56%	\$230,000.00
Hard and soft goods: Beyond expected useful life		\$230,000.00
Total Raw Cost	100.00%	\$429,456.00

Additional Hard Cost (Template: Army Lodging Renovation)

Parameter Name	Percent	Amount
Spirit	0.50%	\$2,362.01
Force Protection	9.00%	\$42,728.72
General Conditions	10.00%	\$42,945.60
Total Additional Hard Cost		\$88,036.33

Soft Cost (Template: Army Lodging Renovation)

Parameter Name	Percent	Amount
Contingency	10.00%	\$51,749.23
SIOH Conus	6.50%	\$37,000.70
Design	10.00%	\$51,749.23
08 MYr Inflation Fct	9.93%	\$65,338.56
Total Soft Cost		\$205,837.72
Total Project		\$723,330.06

Renovation

The Renovation Cost is based on making changes to the building to meet the Army Lodging Standard Functional Criteria. Unless otherwise stated, this cost also includes all building deficiencies listed under the Condition Assessment Cost.

Summary of Project Renovation Cost

CSI	Percent	Amount
09 Finishes	55.69%	\$16,960.20
Ceiling Finishes		\$2,630.40
Floor Finishes		\$3,532.80
Partitions		\$3,659.10
Wall Finishes		\$7,137.90
11 Equipment	9.85%	\$3,000.00
Other Equipment		\$3,000.00
13 Special Construction	3.94%	\$1,200.00
Communications & Security		\$720.00
Sprinklers		\$480.00
15 Mechanical	21.06%	\$6,412.00
Cooling Generating Systems		\$1,920.00
Domestic Water Dist		\$1,200.00
Plumbing Fixtures		\$3,292.00
16 Electrical	9.46%	\$2,880.00
Lighting & Branch Wiring		\$2,880.00
Total Raw Cost	100.00%	\$30,452.20

Additional Hard Cost (Template: Army Lodging Renovation)

Parameter Name	Percent	Amount
Spirit	0.50%	\$167.49
Force Protection	9.00%	\$3,029.84
General Conditions	10.00%	\$3,045.22
Total Additional Hard Cost		\$6,242.55

Soft Cost (Template: Army Lodging Renovation)

Parameter Name	Percent	Amount
Contingency	10.00%	\$3,669.47
SIOH Conus	6.50%	\$2,623.67
Design	10.00%	\$3,669.47
08 MYr Inflation Fct	9.93%	\$4,633.08
Total Soft Cost		\$14,595.70
Total Project Cost for Renovation		\$51,290.45

Replacement

The Replacement Cost is the cost to rebuild the units as part of a new facility including the appropriate back-of-house and public spaces. This cost is based on number and types of units in the renovation model.

Summary of Project Replacement Cost

CSI	Percent	Amount
02 Site Work	1.87%	\$41,669.75
Site Earthwork		\$41,669.75
03 Concrete	19.68%	\$437,627.30
Floor Construction		\$299,692.30
Slab on Grade		\$30,810.00
Stair Construction		\$14,700.00
Standard Foundations		\$92,425.00
04 Masonry	5.50%	\$122,356.83
Exterior Walls		\$122,356.83
07 Thermal & Moisture Protection	5.72%	\$127,102.03
Roof Construction		\$50,919.56
Roof Coverings		\$76,182.46
08 Doors & Windows	10.16%	\$225,909.00
Exterior Doors		\$6,165.00
Exterior Windows		\$180,000.00
Interior Doors		\$39,744.00
09 Finishes	14.91%	\$331,372.97
Ceiling Finishes		\$54,309.33
Floor Finishes		\$122,905.23
Partitions		\$84,433.61
Wall Finishes		\$69,724.80
11 Equipment	3.69%	\$82,000.00
Other Equipment		\$82,000.00
13 Special Construction	5.01%	\$111,279.70
Communications & Security		\$50,094.35
Sprinklers		\$61,185.35
15 Mechanical	17.32%	\$385,029.80
Cooling Generating Systems		\$215,904.80
Domestic Water Dist		\$49,200.00
Plumbing Fixtures		\$119,925.00
16 Electrical	6.92%	\$153,835.00
Electrical Service & Distribution		\$153,835.00
19 FF&E	9.22%	\$205,000.00
Interior FF&E allowance		\$205,000.00
Total Raw Cost	100.00%	\$2,223,182.38

Additional Hard Cost (Template: Army Lodging New Construction)

Parameter Name	Percent	Amount
Spirit	0.50%	\$12,227.50
Force Protection	0.00%	\$0.00
General Cond	10.00%	\$222,318.24
Total Additional Hard Cost		\$234,545.74

Soft Cost (Template: Army Lodging New Construction)

Parameter Name	Percent	Amount
Contingency	5.00%	\$122,886.41
SIOH Conus	6.50%	\$167,739.94
Design	10.00%	\$245,772.81
08 MYr Inflation Fct	9.93%	\$297,316.84
Total Soft Cost		\$833,716.00
Total Project Cost for Replacement		\$3,291,444.12

INSERT BUILDING 508 FLOOR PLANS HERE



Building 509

Building 509

Building 509 was constructed in 1969 and under went major renovation in 2001. The 16,114 square foot facility contains 35 lodging units functioning as 32 extended stay rooms and 3 family suites.

Significant Assumptions

The replacement cost model is based on 31 extended stay rooms 2 family suites.

The renovation uses the existing foot print, with the plan reworked to meet current lodging size requirements.

This building is in good condition for both the Condition Assessment and Function Criteria. In this building the Condition Assessment costs include the wellness items and the Renovation Cost includes functional renovations but not Condition Assessment cost due to the limited nature of the renovation. Therefore in the Cost Analysis the sum of the Condition Assessment and Renovation cost is used for the ratio to the Replacement Cost

The renovation and replacement cost models include any public or back-of-the-house spaces as outlined in the Areas and Occupancies Schedule Template included in the Appendix.

All costs are adjusted by the Area Cost Factor of 100% for Fort Belvoir.

Cost Analysis

Condition Assessment & Renovation Cost	\$697,515.00
Replacement Cost	\$2,634,450.00
Condition Assessment & Renovation to Replacement Cost Ratio	26.48%

Because the sum of the Condition Assessment and Renovation Costs to Replacement Cost Ratio is less than 50%, repair and continued use of Building 509 is recommended.

Attributes

01.Number of Units Constructed	35
02.Number of Units Used	35
03.Back of House Function	No
04.Single Room w/o FullKitchen	0
05.Single Room w/ Full Kitchen	33
06.Multi Room wo/ Full Kitchen	0
07.Multi Room w/ Full Kitchen	3
08.DVQ wo/ Full Kitchen	0
09.DVQ w/ Full Kitchen	0
10.Operating as Standard Room	0
11.Operating as Extended Stay	33
12.Operating as Family Suite	3
13.Renovated to Standard	0
14.Renovated to Extended Stay	31
15.Renovated to Family Suite	2
16.Delta renovation	-2

Condition Analysis/Recommendation

FF&E

FF&E Allowance

- Analysis: The FF&E consists of a bed with headboard, night stand, TV/VCR with stand, dresser, desk with chair, and lamp. The suites have an additional TV/VCR plus couch and recliner. They are in fair condition.
- Recommendation: Replace the FF&E.

Foundations

Standard Foundations

- Analysis: The foundation is concrete with CMU blocks which are in good condition.
- Recommendation: No corrective action required.

Slab on Grade

- Analysis: The slab on grade is concrete with no visible signs of failure.
- Recommendation: No corrective action required.

Superstructure

Floor Construction

- Analysis: The floor construction is wood floor joist which are in good condition.
- Recommendation: No corrective action required.

Roof Construction

- Analysis: The roof construction is wood truss which appears to be in good condition.
- Recommendation: No corrective action required.

Exterior Enclosure

Exterior Walls

- Analysis: The exterior walls are brick veneer which are in good condition.
- Recommendation: No corrective action required.

Exterior Windows

- Analysis: The exterior windows are insulated units which are in good condition.
- Recommendation: No corrective action required.

Exterior Doors

- Analysis: The exterior doors are hollow metal and are in good condition.
- Recommendation: No corrective action required.

Roofing

Roof Coverings

- Analysis: The roof covering is asphalt shingles. The porch was added during the renovation.
- Recommendation: No corrective action required.

Interior Construction**Partitions**

- Analysis: The interior partitions are drywall on metal studs and are in good condition.
- Recommendation: No corrective action required.

Interior Doors

- Analysis: The interior doors are hollow core wood and are in good condition.
- Recommendation: No corrective action required.

Stairs**Stair Construction**

- Analysis: The stair construction at the breezeway and exterior stair towers are concrete and in good condition.
- Recommendation: No corrective action required.

Interior Finishes**Wall Finishes**

- Analysis: The wall finish is vinyl wall covering that is in fair condition.
- Recommendation: Replace the vinyl wall covering.

Floor Finishes

- Analysis: The floor finishes are carpet and VCT in front of the kitchenette. They are in fair condition.
- Recommendation: Replace the floor finishes.

Ceiling Finishes

- Analysis: The ceilings are painted drywall. They are in fair condition.
- Recommendation: Paint the drywall ceilings.

Plumbing**Plumbing Fixtures**

- Analysis: The bathroom fixtures are in good condition.
- Recommendation: No corrective action required.

Domestic Water Distribution

- Analysis: The domestic water system appears to be in good condition.
- Recommendation: No corrective action required.

HVAC**Cooling Generating Systems**

- Analysis: Each building has its own boiler and A/C unit that are in good condition.

- Recommendation: Replace the current system with PTAC units.

Fire Protection

Sprinklers

- Analysis: The sprinkler system is in good condition.
- Recommendation: No corrective action necessary.

Electrical

Electrical Service/Distribution

- Analysis: The electric service is 800 amp 208/120y 3Phase Siemens service that is in good condition.
- Recommendation: No corrective action required.

Communications and Security

- Analysis: The fire alarm is in good condition.
- Recommendation: No corrective action required.

Equipment

Other Equipment

- Analysis: The washing machines are in fair condition.
- Recommendation: Replace the washing machines.

Site Preparation

Site Earthwork

- Analysis: The site is in good condition.
- Recommendation: No corrective action required.

Major Functional Criteria

Major Functional Criteria Analysis

The following are existing conditions that do not meet the Functional Criteria and are considered major deficits. Listed are the recommendations or solutions for remedying each deficit.

- **Back-of-House Spaces**

Most of the back-of-the-house spaces are required at the main lodging building on post. Presently these are located in building 470, and are not included in this building.

- **Public Spaces**

Most of the back-of-the-house spaces are required at the main lodging building on post. Presently these are located in building 470, and are not included in this building.

Condition Assessment/Renovation/Replacement Analysis

Condition Assessments

The Condition Assessment Cost lists what is required to make the building well as it is currently functioning. The cost includes all deficient items based on our field observation and using the Army Lodging standard Cap Ex replacement schedule.

Summary of Project Cost

CSI	Percent	Amount
09 Finishes	26.53%	\$96,198.76
Carpet: Beyond Useful Life		\$26,735.76
Interior ceilings: Paint Failing		\$7,434.00
VCT: Beyond Useful Life		\$5,035.00
Vinyl Wall Covering: Beyond expected useful life		\$56,994.00
11 Equipment	0.69%	\$2,500.00
Washing Machine: Beyond expected useful life.		\$2,500.00
15 Mechanical	18.99%	\$68,842.80
Hydronic heating system: Beyond expt useful life		\$68,842.80
19 FF&E	53.79%	\$195,000.00
Hard and soft goods: Beyond expected useful life		\$195,000.00
Total Raw Cost	100.00%	\$362,542.00

Additional Hard Cost (Template: Army Lodging Renovation)

Parameter Name	Percent	Amount
Spirit	0.50%	\$1,993.98
Force Protection	9.00%	\$36,071.12
General Conditions	10.00%	\$36,254.20
Total Additional Hard Cost		\$74,319.30

Soft Cost (Template: Army Lodging Renovation)

Parameter Name	Percent	Amount
Contingency	10.00%	\$43,686.13
SIOH Conus	6.50%	\$31,235.58
Design	10.00%	\$43,686.13
08 MYr Inflation Fct	9.93%	\$55,158.09
Total Soft Cost		\$173,765.93
Total Project		\$610,627.23

Renovation

The Renovation Cost is based on making changes to the building to meet the Army Lodging Standard Functional Criteria. Unless otherwise stated, this cost also includes all building deficiencies listed under the Condition Assessment Cost.

Summary of Project Renovation Cost

CSI	Percent	Amount
08 Doors & Windows	11.09%	\$5,719.00
Exterior Doors		\$2,592.00
Interior Doors		\$3,127.00
09 Finishes	38.11%	\$19,661.10
Ceiling Finishes		\$4,689.90
Floor Finishes		\$7,555.68
Partitions		\$5,416.32
Wall Finishes		\$1,999.20
10 Specialties	5.85%	\$3,016.00
Fittings		\$3,016.00
11 Equipment	5.82%	\$3,000.00
Other Equipment		\$3,000.00
13 Special Construction	3.13%	\$1,614.00
Communications & Security		\$1,134.00
Sprinklers		\$480.00
15 Mechanical	22.82%	\$11,775.00
Cooling Generating Systems		\$1,920.00
Domestic Water Dist		\$1,200.00
Plumbing Fixtures		\$8,655.00
16 Electrical	13.19%	\$6,804.00
Lighting & Branch Wiring		\$6,804.00
Total Raw Cost	100.00%	\$51,589.10

Additional Hard Cost (Template: Army Lodging Renovation)

Parameter Name	Percent	Amount
Spirit	0.50%	\$283.74
Force Protection	9.00%	\$5,132.86
General Conditions	10.00%	\$5,158.91
Total Additional Hard Cost		\$10,575.51

Soft Cost (Template: Army Lodging Renovation)

Parameter Name	Percent	Amount
Contingency	10.00%	\$6,216.46
SIOH Conus	6.50%	\$4,444.77
Design	10.00%	\$6,216.46
08 MYr Inflation Fct	9.93%	\$7,848.90
Total Soft Cost		\$24,726.59
Total Project Cost for Renovation		\$86,891.20

Replacement

The Replacement Cost is the cost to rebuild the units as part of a new facility including the appropriate back-of-house and public spaces. This cost is based on number and types of units in the renovation model.

Summary of Project Replacement Cost

CSI	Percent	Amount
02 Site Work	1.84%	\$32,818.25
Site Earthwork		\$32,818.25
03 Concrete	19.52%	\$347,288.18
Floor Construction		\$235,578.18
Slab on Grade		\$24,255.00
Stair Construction		\$14,700.00
Standard Foundations		\$72,755.00
04 Masonry	5.85%	\$104,073.63
Exterior Walls		\$104,073.63
07 Thermal & Moisture Protection	5.63%	\$100,136.86
Roof Construction		\$40,008.13
Roof Coverings		\$60,128.73
08 Doors & Windows	10.48%	\$186,457.00
Exterior Doors		\$6,165.00
Exterior Windows		\$148,000.00
Interior Doors		\$32,292.00
09 Finishes	14.70%	\$261,607.15
Ceiling Finishes		\$42,750.81
Floor Finishes		\$98,433.44
Partitions		\$66,192.50
Wall Finishes		\$54,230.40
11 Equipment	3.71%	\$66,000.00
Other Equipment		\$66,000.00
13 Special Construction	4.92%	\$87,597.02
Communications & Security		\$39,433.21
Sprinklers		\$48,163.81
15 Mechanical	17.20%	\$306,080.68
Cooling Generating Systems		\$169,955.68
Domestic Water Dist		\$39,600.00
Plumbing Fixtures		\$96,525.00
16 Electrical	6.88%	\$122,363.00
Electrical Service & Distribution		\$122,363.00
19 FF&E	9.27%	\$165,000.00
Interior FF&E allowance		\$165,000.00
Total Raw Cost	100.00%	\$1,779,421.77

Additional Hard Cost (Template: Army Lodging New Construction)

Parameter Name	Percent	Amount
Spirit	0.50%	\$9,786.82
Force Protection	0.00%	\$0.00
General Cond	10.00%	\$177,942.18
Total Additional Hard Cost		\$187,729.00

Soft Cost (Template: Army Lodging New Construction)

Parameter Name	Percent	Amount
Contingency	5.00%	\$98,357.54
SIOH Conus	6.50%	\$134,258.04
Design	10.00%	\$196,715.08
08 MYr Inflation Fct	9.93%	\$237,970.61
Total Soft Cost		\$667,301.26
Total Project Cost for Replacement		\$2,634,452.03

INSERT BUILDING 509 FLOOR PLANS HERE



Building 806

Building 806

Building 806 was constructed in 1960's. The 8,000 square foot facility contains 10 lodging units. The building is functioning as 9 family suites.

Significant Assumptions

The replacement and renovation cost models are based on 12 family suites.

The renovation uses the existing foot print, with the plan reworked to meet current lodging size requirements.

The renovation cost includes all condition assessment costs.

The renovation and replacement cost models include any public or back-of-the-house spaces as outlined in the Areas and Occupancies Schedule Template included in the Appendix.

All costs are adjusted by the Area Cost Factor of 100% for Ft Belvoir.

Cost Analysis

Renovation Cost	\$938,070.00
Replacement Cost	\$1,405,330.00
Renovation to Replacement Cost Ratio	66.75%

Because the Renovation to Replacement Cost Ratio is greater than 50%, renovation of Building 806 is not recommended.

Attributes

01.Number of Units Constructed	10
02.Number of Units Used	9
03.Back of House Function	No
04.Single Room w/o FullKitchen	0
05.Single Room w/ Full Kitchen	0
06.Multi Room wo/ Full Kitchen	0
07.Multi Room w/ Full Kitchen	10
08.DVQ wo/ Full Kitchen	0
09.DVQ w/ Full Kitchen	0
10.Operating as Standard Room	0
11.Operating as Extended Stay	0
12.Operating as Family Suite	9
13.Renovated to Standard	0
14.Renovated to Extended Stay	0
15.Renovated to Family Suite	12
16.Delta renovation	2

Condition Analysis/Recommendation

FF&E

FF&E Allowance

- Analysis: The units within the building are two bedroom which include: a bed with head board, dresser, two night stands, TV/VCR cabinet, table with 3 chairs, sofa, easy chair. They in fair condition.
- Recommendation: Replace the FF&E.

Foundations

Standard Foundations

- Analysis: The standard foundation poured concrete has no visible signs of failure.
- Recommendation: No corrective action required.

Slab on Grade

- Analysis: The slab on grade is in the basement, mechanical/laundry room and is in good condition.
- Recommendation: No corrective action needed.

Superstructure

Floor Construction

- Analysis: The floor construction is that of wood floor joist in good condition.
- Recommendation: No corrective action required.

Roof Construction

- Analysis: The roof construction is that of wood trusses which appear to be in good condition. The soffit at the eve is in poor condition.
- Recommendation: Replace the soffitt.

Exterior Enclosure

Exterior Walls

- Analysis: The exterior is a combination of face brick on the first floor and vinyl siding on the second floor up to the roof. They are both in good condition.
- Recommendation: No corrective action required.

Exterior Windows

- Analysis: The exterior windows are thermo-pane double hung windows that are in good condition.
- Recommendation: No corrective action required.

Exterior Doors

- Analysis: The exterior hollowm metal doors are in good condition.
- Recommendation: No corrective action required.

Roofing

Roof Coverings

- Analysis: The roof covering is asphalt shingles which appear to be in poor condition.
- Recommendation: Replace the asphalt shingle roof.

Interior Construction

Partitions

- Analysis: The interior partitions are drywall on studs and are in good condition.
- Recommendation: No corrective action required.

Interior Doors

- Analysis: The interior doors are hollow core wood and are in fair condition.
- Recommendation: No corrective action required.

Interior Finishes

Wall Finishes

- Analysis: The vinyl wall coverings are in fair condition.
- Recommendation: Replace the vinyl wall coverings.

Floor Finishes

- Analysis: The living areas are carpeted with VCT in the kitchen. They are in fair condition.
- Recommendation: Replace the carpet and VCT.

Ceiling Finishes

- Analysis: The interior ceilings are painted drywall and are in fair condition.
- Recommendation: Paint the drywall ceilings.

Plumbing

Plumbing Fixtures

- Analysis: The plumbing fixtures include tub/shower, water closet, and sink with vanity. They are in good condition.
- Recommendation: No corrective action required.

Domestic Water Distribution

- Analysis: The domestic water system appears to be in good condition. The hot water is provided by the hospital via their steam system.
- Recommendation: No corrective action required.

HVAC

Cooling Generating Systems

- Analysis: The heating and cooling is via a two pipe fan coil unit which is fed from the hospital. The system is in good condition.
- Recommendation: No corrective action required.

Fire Protection

Sprinklers

- Analysis: The sprinkler system is in good condition.
- Recommendation: No corrective action required.

Electrical

Electrical Service/Distribution

- Analysis: The electrical service is 600 amp , 208/120 Y 3 phase service in good condition.
- Recommendation: No corrective action required.

Communications and Security

- Analysis: The fire alarm system appears to be in good condition.
- Recommendation: No corrective action required.

Equipment

Other Equipment

- Analysis: The other equipment includes a separate, full kitchen, with refrigerator, stove, microwave, and sink. They are in good condition. The laundry room has a washer for the guests which is in fair condition.
- Recommendation: Replace the washing machines.

Site Preparation

Site Earthwork

- Analysis: The site is in good condition.
- Recommendation: No corrective action required.

Major Functional Criteria

Major Functional Criteria Analysis

The following are existing conditions that do not meet the Functional Criteria and are considered major deficits. Listed are the recommendations or solutions for remedying each deficit.

- **Back-of-House Spaces**

Most of the back-of-the-house spaces are required at the main lodging building on post. Presently these are located in building 470, and are not included in this building.

- **Family Guest Suite**

Room Size and Configuration: The rooms do not meet size and configuration requirements.

Recommendation: A Renovation Cost estimate is used to indicate a total redo of rooms to meet the standard. This renovation cost will make the building more than 50% of the new construction cost.

- **Public Spaces**

Most of the back-of-the-house spaces are required at the main lodging building on post. Presently these are located in building 470, and are not included in this building.

Condition Assessment/Renovation/Replacement Analysis

Condition Assessments

The Condition Assessment Cost lists what is required to make the building well as it is currently functioning. The cost includes all deficient items based on our field observation and using the Army Lodging standard Cap Ex replacement schedule.

Summary of Project Cost

CSI	Percent	Amount
07 Thermal & Moisture Protection	18.42%	\$26,937.60
Asphalt Shingle Roof: Beyond Useful Life		\$21,014.40
Soffit: Damaged or failing		\$5,923.20
09 Finishes	46.53%	\$68,038.63
Carpet: Beyond Useful Life		\$19,249.76
Interior ceilings: Paint Failing		\$4,248.00
VCT: Beyond Useful Life		\$1,116.87
Vinyl Wall Covering: Beyond expected useful life		\$43,424.00
11 Equipment	0.85%	\$1,250.00
Washing Machine: Beyond expected useful life.		\$1,250.00
19 FF&E	34.19%	\$50,000.00
Hard and soft goods: Beyond expected useful life		\$50,000.00
Total Raw Cost	100.00%	\$146,226.00

Additional Hard Cost (Template: Army Lodging Renovation)

Parameter Name	Percent	Amount
Spirit	0.50%	\$804.24
Force Protection	9.00%	\$14,548.76
General Conditions	10.00%	\$14,622.60
Total Additional Hard Cost		\$29,975.60

Soft Cost (Template: Army Lodging Renovation)

Parameter Name	Percent	Amount
Contingency	10.00%	\$17,620.16
SIOH Conus	6.50%	\$12,598.41
Design	10.00%	\$17,620.16
08 MYr Inflation Fct	9.93%	\$22,247.21
Total Soft Cost		\$70,085.94
Total Project		\$246,287.54

Renovation

The Renovation Cost is based on making changes to the building to meet the Army Lodging Standard Functional Criteria. Unless otherwise stated, this cost also includes all building deficiencies listed under the Condition Assessment Cost.

Summary of Project Renovation Cost

CSI	Percent	Amount
03 Concrete	1.32%	\$7,350.00
Stair Construction		\$7,350.00
07 Thermal & Moisture Protection	1.99%	\$11,096.06
Roof Construction		\$11,096.06
08 Doors & Windows	3.35%	\$18,630.00
Interior Doors		\$18,630.00
09 Finishes	32.46%	\$180,774.53
Ceiling Finishes		\$32,999.40
Floor Finishes		\$41,958.36
Partitions		\$40,396.61
Wall Finishes		\$65,420.16
11 Equipment	4.31%	\$24,000.00
Other Equipment		\$24,000.00
13 Special Construction	8.65%	\$48,160.00
Communications & Security		\$21,680.00
Sprinklers		\$26,480.00
15 Mechanical	25.66%	\$142,940.00
Cooling Generating Systems		\$93,440.00
Domestic Water Dist		\$14,400.00
Plumbing Fixtures		\$35,100.00
16 Electrical	11.49%	\$64,000.00
Electrical Service & Distribution		\$64,000.00
19 FF&E	10.77%	\$60,000.00
Interior FF&E allowance		\$60,000.00
Total Raw Cost	100.00%	\$556,950.59

Additional Hard Cost (Template: Army Lodging Renovation)

Parameter Name	Percent	Amount
Spirit	0.50%	\$3,063.23
Force Protection	9.00%	\$55,413.80
General Conditions	10.00%	\$55,695.06
Total Additional Hard Cost		\$114,172.09

Soft Cost (Template: Army Lodging Renovation)

Parameter Name	Percent	Amount
Contingency	10.00%	\$67,112.27
SIOH Conus	6.50%	\$47,985.27
Design	10.00%	\$67,112.27
08 MYr Inflation Fct	9.93%	\$84,735.92
Total Soft Cost		\$266,945.72
Total Project Cost for Renovation		\$938,068.40

Replacement

The Replacement Cost is the cost to rebuild the units as part of a new facility including the appropriate back-of-house and public spaces. This cost is based on number and types of units in the renovation model.

Summary of Project Replacement Cost

CSI	Percent	Amount
02 Site Work	5.67%	\$53,835.50
Site Earthwork		\$53,835.50
03 Concrete	12.60%	\$119,640.00
Floor Construction		\$40,000.00
Slab on Grade		\$39,820.00
Standard Foundations		\$39,820.00
04 Masonry	7.80%	\$74,029.24
Exterior Walls		\$74,029.24
07 Thermal & Moisture Protection	12.78%	\$121,293.06
Roof Construction		\$23,042.06
Roof Coverings		\$98,251.00
08 Doors & Windows	9.31%	\$88,381.00
Exterior Doors		\$6,165.00
Exterior Windows		\$64,000.00
Interior Doors		\$18,216.00
09 Finishes	14.88%	\$141,206.23
Ceiling Finishes		\$23,175.24
Floor Finishes		\$40,447.82
Partitions		\$40,396.61
Wall Finishes		\$37,186.56
11 Equipment	4.42%	\$42,000.00
Other Equipment		\$42,000.00
13 Special Construction	5.05%	\$47,943.28
Communications & Security		\$21,582.44
Sprinklers		\$26,360.84
15 Mechanical	13.82%	\$131,212.00
Cooling Generating Systems		\$63,712.00
Domestic Water Dist		\$32,400.00
Plumbing Fixtures		\$35,100.00
16 Electrical	7.34%	\$69,679.00
Electrical Service & Distribution		\$69,679.00
19 FF&E	6.32%	\$60,000.00
Interior FF&E allowance		\$60,000.00
Total Raw Cost	100.00%	\$949,219.31

Additional Hard Cost (Template: Army Lodging New Construction)

Parameter Name	Percent	Amount
Spirit	0.50%	\$5,220.71
Force Protection	0.00%	\$0.00
General Cond	10.00%	\$94,921.93
Total Additional Hard Cost		\$100,142.64

Soft Cost (Template: Army Lodging New Construction)

Parameter Name	Percent	Amount
Contingency	5.00%	\$52,468.10
SIOH Conus	6.50%	\$71,618.95
Design	10.00%	\$104,936.20
08 MYr Inflation Fct	9.93%	\$126,943.65
Total Soft Cost		\$355,966.90
Total Project Cost for Replacement		\$1,405,328.85

INSERT BUILDING 806 FLOOR PLANS HERE



Building 807

Building 807

Building 807 was constructed in 1960's. The 8,000 square foot facility contains 16 lodging units. The building is functioning as 4 standard stay rooms and 12 family suites.

Significant Assumptions

The replacement and renovation cost models are based on 6 standard stay rooms and 14 family suites.

The renovation uses the existing foot print, with the plan reworked to meet current lodging size requirements.

The renovation cost includes all condition assessment costs.

The renovation and replacement cost models include any public or back-of-the-house spaces as outlined in the Areas and Occupancies Schedule Template included in the Appendix.

All costs are adjusted by the Area Cost Factor of 100% for Ft Belvoir.

Cost Analysis

Renovation Cost	\$1,401,770.00
Replacement Cost	\$2,345,730.00
Renovation to Replacement Cost Ratio	59.76%

Because the Renovation to Replacement Cost Ratio is greater than 50%, renovation of Building 807 is not recommended.

Attributes

01.Number of Units Constructed	16
02.Number of Units Used	16
03.Back of House Function	No
04.Single Room w/o FullKitchen	0
05.Single Room w/ Full Kitchen	0
06.Multi Room wo/ Full Kitchen	0
07.Multi Room w/ Full Kitchen	16
08.DVQ wo/ Full Kitchen	0
09.DVQ w/ Full Kitchen	0
10.Operating as Standard Room	0
11.Operating as Extended Stay	0
12.Operating as Family Suite	16
13.Renovated to Standard	6
14.Renovated to Extended Stay	0
15.Renovated to Family Suite	14
16.Delta renovation	4

Condition Analysis/Recommendation

FF&E

FF&E Allowance

- Analysis: The units contain the following FF&E items: a bed with headboard, dresser, and two night stands, couch, easy chair, coffee table, table with 3 chairs, and TV/ VCR on stand. They are in fair condition.
- Recommendation: Replace the FF&E.

Foundations

Standard Foundations

- Analysis: The building has a poured concrete foundation which is in good condition.
- Recommendation: No corrective action required.

Slab on Grade

- Analysis: The slab on grade is concrete in good condition.
- Recommendation: No corrective action required.

Superstructure

Floor Construction

- Analysis: The floor construction is that of wood floor joist which are sound and good condition.
- Recommendation: No corrective action required.

Roof Construction

- Analysis: The roof construction is that of wood trusses which appear to be sound and in good condition. The soffit at the eve of the roof is in poor condition.
- Recommendation: Replace the soffit.

Exterior Enclosure

Exterior Walls

- Analysis: The exterior walls are face brick at the first floor and vinyl siding on the second floor up to the roof. They are in good condition.
- Recommendation: No corrective action required.

Exterior Windows

- Analysis: The exterior windows are thermo-pane double hung windows in good condition.
- Recommendation: No corrective action required.

Exterior Doors

- Analysis: The exterior doors have recently been replaced and are in good condition.
- Recommendation: No corrective action required.

Roofing

Roof Coverings

- Analysis: The asphalt shingle roof appears to be in poor condition.
- Recommendation: Replace the shingle roof.

Interior Construction

Partitions

- Analysis: The interior partitions are drywall on studs and are in good condition.
- Recommendation: No corrective action required.

Interior Doors

- Analysis: The interior doors are hollow core wood and are in fair condition.
- Recommendation: No corrective action required.

Fittings

- Analysis: There are no fittings in this building.
- Recommendation: No corrective action required.

Stairs

Stair Construction

- Analysis: The stair construction is wood in good condition.
- Recommendation: No corrective action required.

Interior Finishes

Wall Finishes

- Analysis: The wall finish is vinyl wall covering that is currently in fair condition.
- Recommendation: Replace the vinyl wall covering.

Floor Finishes

- Analysis: The floor finishes are carpet in the living area and VCT in the kitchen. They are in fair condition.
- Recommendation: Replace the carpet and VCT.

Ceiling Finishes

- Analysis: The ceiling finish is painted drywall that is in fair condition.
- Recommendation: Paint the ceilings.

Plumbing

Plumbing Fixtures

- Analysis: The bathroom fixtures include a tub with shower, water closet and sink with vanity. They are in good condition.
- Recommendation: No corrective action required.

Domestic Water Distribution

- Analysis: The domestic water distribution system appears to be in good condition. Hot water is via the steam system from the hospital.
- Recommendation: No corrective action required.

HVAC

Cooling Generating Systems

- Analysis: The heating and A/C is via a two pipe fan coil unit which is fed via the hospital system. The system is in good condition.
- Recommendation: No corrective action required.

Fire Protection

Sprinklers

- Analysis: The sprinkler system is in good condition.
- Recommendation: No corrective action required.

Electrical

Electrical Service/Distribution

- Analysis: The electrical service is a 600 amp 208/120Y 3 phase service in good condition.
- Recommendation: No corrective action required.

Communications and Security

- Analysis: The fire alarm system appears to be in good condition.
- Recommendation: No corrective action required.

Equipment

Other Equipment

- Analysis: The washing machines are in fair condition.
- Recommendation: Replace the washing machines.

Site Preparation

Site Earthwork

- Analysis: The site is in good condition.
- Recommendation: No corrective action required.

Major Functional Criteria

Major Functional Criteria Analysis

The following are existing conditions that do not meet the Functional Criteria and are considered major deficits. Listed are the recommendations or solutions for remedying each deficit.

- **Back-of-House Spaces**

Most of the back-of-the-house spaces are required at the main lodging building on post. Presently these are located in building 470, and are not included in this building.

- **Family Guest Suite**

Room Size and Configuration: The rooms do not meet size and configuration requirements.

Recommendation: A Renovation Cost estimate is used to indicate a total redo of rooms to meet the standard. This renovation cost will make the building more than 50% of the new construction cost.

- **Public Spaces**

Most of the back-of-the-house spaces are required at the main lodging building on post. Presently these are located in building 470, and are not included in this building.

Condition Assessment/Renovation/Replacement Analysis

Condition Assessments

The Condition Assessment Cost lists what is required to make the building well as it is currently functioning. The cost includes all deficient items based on our field observation and using the Army Lodging standard Cap Ex replacement schedule.

Summary of Project Cost

CSI	Percent	Amount
07 Thermal & Moisture Protection	16.78%	\$37,313.80
Asphalt Shingle Roof: Beyond Useful Life		\$29,292.80
Soffit: Damaged or failing		\$8,021.00
09 Finishes	46.67%	\$103,740.75
Carpet: Beyond Useful Life		\$26,602.18
Interior ceilings: Paint Failing		\$5,870.50
VCT: Beyond Useful Life		\$1,789.67
Vinyl Wall Covering: Beyond expected useful life		\$69,478.40
11 Equipment	0.56%	\$1,250.00
Washing Machine: Beyond expected useful life.		\$1,250.00
19 FF&E	35.99%	\$80,000.00
Hard and soft goods: Beyond expected useful life		\$80,000.00
Total Raw Cost	100.00%	\$222,305.00

Additional Hard Cost (Template: Army Lodging Renovation)

Parameter Name	Percent	Amount
Spirit	0.50%	\$1,222.68
Force Protection	9.00%	\$22,118.24
General Conditions	10.00%	\$22,230.50
Total Additional Hard Cost		\$45,571.41

Soft Cost (Template: Army Lodging Renovation)

Parameter Name	Percent	Amount
Contingency	10.00%	\$26,787.64
SIOH Conus	6.50%	\$19,153.16
Design	10.00%	\$26,787.64
08 MYr Inflation Fct	9.93%	\$33,822.06
Total Soft Cost		\$106,550.51
Total Project		\$374,426.92

Renovation

The Renovation Cost is based on making changes to the building to meet the Army Lodging Standard Functional Criteria. Unless otherwise stated, this cost also includes all building deficiencies listed under the Condition Assessment Cost.

Summary of Project Renovation Cost

CSI	Percent	Amount
03 Concrete	0.88%	\$7,350.00
Stair Construction		\$7,350.00
07 Thermal & Moisture Protection	1.94%	\$16,106.50
Roof Construction		\$16,106.50
08 Doors & Windows	3.13%	\$26,082.00
Interior Doors		\$26,082.00
09 Finishes	32.57%	\$271,095.77
Ceiling Finishes		\$49,499.10
Floor Finishes		\$67,220.40
Partitions		\$58,637.71
Wall Finishes		\$95,738.56
11 Equipment	4.81%	\$40,000.00
Other Equipment		\$40,000.00
13 Special Construction	8.14%	\$67,725.00
Communications & Security		\$30,487.50
Sprinklers		\$37,237.50
15 Mechanical	25.70%	\$213,900.00
Cooling Generating Systems		\$131,400.00
Domestic Water Dist		\$24,000.00
Plumbing Fixtures		\$58,500.00
16 Electrical	10.81%	\$90,000.00
Electrical Service & Distribution		\$90,000.00
19 FF&E	12.02%	\$100,000.00
Interior FF&E allowance		\$100,000.00
Total Raw Cost	100.00%	\$832,259.27

Additional Hard Cost (Template: Army Lodging Renovation)

Parameter Name	Percent	Amount
Spirit	0.50%	\$4,577.43
Force Protection	9.00%	\$82,805.64
General Conditions	10.00%	\$83,225.93
Total Additional Hard Cost		\$170,608.99

Soft Cost (Template: Army Lodging Renovation)

Parameter Name	Percent	Amount
Contingency	10.00%	\$100,286.83
SIOH Conus	6.50%	\$71,705.08
Design	10.00%	\$100,286.83
08 MYr Inflation Fct	9.93%	\$126,622.10
Total Soft Cost		\$398,900.83
Total Project Cost for Renovation		\$1,401,769.08

Replacement

The Replacement Cost is the cost to rebuild the units as part of a new facility including the appropriate back-of-house and public spaces. This cost is based on number and types of units in the renovation model.

Summary of Project Replacement Cost

CSI	Percent	Amount
02 Site Work	2.95%	\$46,727.75
Site Earthwork		\$46,727.75
03 Concrete	16.69%	\$264,457.98
Floor Construction		\$153,442.98
Slab on Grade		\$34,555.00
Stair Construction		\$7,350.00
Standard Foundations		\$69,110.00
04 Masonry	6.30%	\$99,765.58
Exterior Walls		\$99,765.58
07 Thermal & Moisture Protection	7.81%	\$123,712.95
Roof Construction		\$38,354.86
Roof Coverings		\$85,358.09
08 Doors & Windows	8.43%	\$133,563.00
Exterior Doors		\$9,825.00
Exterior Windows		\$96,000.00
Interior Doors		\$27,738.00
09 Finishes	13.98%	\$221,475.28
Ceiling Finishes		\$35,401.74
Floor Finishes		\$67,476.01
Partitions		\$64,154.57
Wall Finishes		\$54,442.96
10 Specialties	0.10%	\$1,508.00
Fittings		\$1,508.00
11 Equipment	1.77%	\$28,000.00
Other Equipment		\$28,000.00
13 Special Construction	5.25%	\$83,208.44
Communications & Security		\$37,457.62
Sprinklers		\$45,750.82
15 Mechanical	23.19%	\$367,440.96
Cooling Generating Systems		\$161,440.96
Domestic Water Dist		\$24,000.00
Plumbing Fixtures		\$182,000.00
16 Electrical	7.23%	\$114,546.00
Electrical Service & Distribution		\$114,546.00
19 FF&E	6.31%	\$100,000.00
Interior FF&E allowance		\$100,000.00
Total Raw Cost	100.00%	\$1,584,405.93

Additional Hard Cost (Template: Army Lodging New Construction)

Parameter Name	Percent	Amount
Spirit	0.50%	\$8,714.23
Force Protection	0.00%	\$0.00
General Cond	10.00%	\$158,440.59

Total Additional Hard Cost	\$167,154.83
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Soft Cost (Template: Army Lodging New Construction)

Parameter Name	Percent	Amount
Contingency	5.00%	\$87,578.04
SIOH Conus	6.50%	\$119,544.02
Design	10.00%	\$175,156.08
08 MYr Inflation Fct	9.93%	\$211,890.20
Total Soft Cost		\$594,168.34
Total Project Cost for Replacement		\$2,345,729.10

INSERT BUILDING 807 FLOOR PLANS HERE

Army Lodging Wellness Recommendation

Appendix

ROOM / SPACE	1-10 Units	11-49 Units	50-149 Units	150-199 Units	200-299 Units	300-399 Units	400-599 Units	600-799 Units	800+	At Main Facility on Post Only	Note
Public Areas											
Exterior Entrance	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
Vestibule	100	100	150	150	200	200	200	200	200		In Main Lodging facilities square footage included in Lobby
Lobby (includes vestibule at Main Lodging facilities)	300-500	300-500	500-800	500-800	800-1000	800-1000	1,000-1,200	1,000-1,200	1,200-1,500	X	Includes square footage of vestibule at Main Lodging facilities
Front Desk	2 station / 100 s.f.	2 station / 100 s.f.	2 station / 100 s.f.	3 station / 150 s.f.	3 station / 150 s.f.	3 station / 250 s.f.	3 station / 250 s.f.	4 station / 300 s.f.	4 station / 300 s.f.	X	
Bell Cart Station	2 carts / 24 s.f.	2 carts / 24 s.f.	3 carts / 36 s.f.	3 carts / 36 s.f.	4 carts / 48 s.f.	4 carts / 48 s.f.	6 carts / 72 s.f.	6 carts / 72 s.f.	8 carts / 96 s.f.		Not required at facilities w/out interior corridors if building is retained.
Breakfast Bar (Seat/Svc)	550	550	550	550	550	550	550	750	1,000	X	Needed at secondary facility, if it is a remote location. CFSC requirement min 550
Passenger Elevators			1 @ 64 s.f. 50-99 rooms 2 @ 64 s.f. 100-149 rooms	2 @ 64 s.f. each	2 @ 64 s.f. each	2 @ 64 s.f. each	2 @ 64 s.f. each 400-499 rooms 3 @ 64 s.f. 500-599 rooms	3 @ 64 s.f. each	3 @ 64 s.f. each		If building is over two stories high
Stairs	Numer of stairs based on plan @ 230 s.f. each	Numer of stairs based on plan @ 230 s.f. each	Numer of stairs based on plan @ 230 s.f. each	Numer of stairs based on plan @ 230 s.f. each	Numer of stairs based on plan @ 230 s.f. each	Numer of stairs based on plan @ 230 s.f. each	Numer of stairs based on plan @ 230 s.f. each	Numer of stairs based on plan @ 230 s.f. each	Numer of stairs based on plan @ 230 s.f. each		
Public Corridors	**	**	**	**	**	**	**	**	**		Minimum 6' wide
Public Telephone Area	2 phones / 12 s.f.	2 phones / 12 s.f.	2 phones / 12 s.f.	2 phones / 12 s.f.	3 phones / 18 s.f.	3 phones / 18 s.f.	4 phones / 24 s.f.	4 phones / 24 s.f.	4 phones / 24 s.f.		House phone in secondary buildings. Pay phones & house phones at Main facility
Vending - Full Service	1 per building / 70 s.f.	1 per building / 70 s.f.	70	70	70-105	105-140	140-210	210-280	280+		1 for every other floor to support up to 200 units / 70 s.f. each
Vending - Ice Only	1 per building / 30 s.f.	1 per building / 30 s.f.	30	30	30-45	45-60	60-90	90-120	120+		1 for every other floor to support up to 200 units / 30 s.f. each
Women - Lobby	100	100	200	200	260	260	315	315	350	X	
Men - Lobby	100	100	200	200	260	260	315	315	350	X	
Multi-Purpose Rm	250	250	250	250	250	250	250	250	250	X	
Study Rooms	See Note	See Note	See Note	See Note	See Note	See Note	See Note	See Note	See Note		1 per 25 extended stay units of 250 s.f. each at posts with schools facilities
Guest Laundries	192	192	192-384	384-576	576-768	768-1152	1152-1536	1536-2112	2112+		CFSC requirement 2w/d for every 75 guest rooms
Gear Wash Rooms	At entrance / 170 s.f. each	At entrance / 170 s.f. each	At entrance / 170 s.f. each	At entrance / 170 s.f. each	At entrance / 170 s.f. each	At entrance / 170 s.f. each	At entrance / 170 s.f. each	At entrance / 170 s.f. each	At entrance / 170 s.f. each		Only at facilities with outdoor training
Guest Bulk Storage	See Note	See Note	See Note	See Note	See Note	See Note	See Note	See Note	See Note		1 unit for every 4 family suites of 25 ea. 40 w/circ.
Guest Rooms											
Guest Room - Standard	300	300	300	300	300	300	300	300			
Guest Room - Ext. Stay	300	300	300	300	300	300	300	300			
Guest Room - Suites	450	450	450	450	450	450	450	450			

ROOM / SPACE	1-10 Units	11-49 Units	50-149 Units	150-199 Units	200-299 Units	300-399 Units	400-599 Units	600-799 Units	800+	At Main Facility on Post Only	Note
Back-of-House Areas											
Manager's Office	180	180	180	180	180	180	180	180	180	X	
Assist. Mgr. Off.	-	-	0 50-99 units 120 100-149 units	120	120	120	120	120	120	X	
Front Office Mgr.	100	100	100	100	100	100	100	100	100	X	
Admin. Offices	2 space / 200-250 s.f.	2 space / 200-250 s.f.	2 spaces / 200-250 s.f.	2 spaces / 200-250 s.f.	5 spaces / 500-600 s.f.	5 spaces / 500-600 s.f.	7 spaces / 800-900 s.f.	7 spaces / 800-900 s.f.	10 spaces / 1,100-1,200 s.f.	X	
Cash Room	50	50	75	75	100	100	125	125	150	X	
Luggage Storage	-	-	75	75	100	100	100	100	100	X	
Admin. Conf. Rm.	250	250	250	250	350	350	350	350	350	X	
Housekeeping Off.	120	120	120	120	120	120	120	120	120	X	
Dirty/Clean Linen Stor.	50	50	50	50	100	100	200	200	400	See Note	At all facilities w/out in-house laundry
In-House Laundry	500	500	500	500	500	500	750	750	900	X	CFSC requirement min 500 s.f
Receiving Office	75	75	75	75	75	75	75	75	75	X	
Maintenance Area	100	100	175	175	250	250	400	400	600	X	
Kitchen Prep Room	150	150	150	150	150	150	150	150	150	X	facility, if it is a remote location.
Break Room		140	210	210	280	280	350	350	420		
Staff Toilet - Men			200	100	100	100	150	150	200		
Staff Toilet - Women		100	100	100	150	150	200	200	250		
Access Corridor	**	**	**	**	**	**	**	**	**		
Receiving	150	150	150	150	150	150	150	150	200	X	
Housekeep. Rms.	128	128-512	512-1280	1280-1792	1792-2560	2560-3456	3456-5120	5120-6912	6912+		128 s.f. for each 15 guest rooms
Service Elevator	80	80	80	80	80	80	80	80	80		
Data/Commo Rm.	100	100	100	100	150	150	150	150	150		
Switch Closets	16 *	16 *	16-48 *	48-64 *	64-96 *	96-128 *	128-144 *	144-256 *	256+ *		1 closet of 16 s.f. for approximately 50 guest rooms
Janitor Closet	50	50	50	50	50	50	50	50	50	X	Only at first floor of Main Lodging facility.
Mechanical Room	*	*	*	*	*	*	*	*	*		
General Stor. Rm.	500	500	500	500	500	500	500	500	500	X	
Bulk Storage Rm.	500	500	500	500	500	500	500	500	500	X	
Electrical Room	140 *	140 *	1 per floor @ 140 s.f. each *	1 per floor @ 140 s.f. each *	1 per floor @ 140 s.f. each *	1 per floor @ 140 s.f. each *	1 per floor @ 140 s.f. each *	1 per floor @ 140 s.f. each *	1 per floor @ 140 s.f. each *		One electrical room to serve no more than 100 rooms.
Elevator Equip.Rm.	84	84	84	84	84	84	84	84	84		
EXTERIOR											
Playground (Outdoor)										X	Play ground required at facilities with family stays.
Grounds Maintenance	400	400	400	400	400	400	400	400	400	X	

* Mechanical/electrical/equipment Spaces to be determined by contractor based on appropriate code and recommended systems.

** Corridors to be determined based on building layout.